The Mining Journal

Established 1835 — Railway & Commercial Gazette

Vol. CCXXXVIII No. 6082 — LONDON, MARCH 14, 1952 — PRICE 8d

It's hardly necessary to tell Mining Engineers and Colliery Managers that efficient coal preparation is more essential than ever these days . . . and it's hardly necessary to state that Birtley Coal Preparation Plant is the best of its kind for preparing run-of-mine coal, from—dust up to 8in. pieces.

The illustration shows part of a Birtley Froth Flotation Plant recently installed for the N.C.B. at Orgreave Colliery.

BIRTLEY *Coal preparation plant for every purpose*

BIRTLEY

THE BIRTLEY CO. LTD., COAL PREPARATION DEPT., MARKET PLACE CHAMBERS, CHESTERFIELD Phone: Chesterfield 4116 (3 lines)

P1704

TO KEEP UPKEEP DOWN!

"DON" Industrial Friction Fabrics reduce maintenance problems—designed and developed in an extensive range of qualities to suit the strenuous conditions of mining. "DON" has unquestionably proved its stamina, resilience and durability in successful application to colliery winding, haulage and handling equipment.

Always specify "DON"

DON
INDUSTRIAL
BRAKE & CLUTCH
LININGS

SERVICE DEPOTS

BELFAST: 'Phone 25103
BIRMINGHAM: 'Phone Aston Cross 1447
BLACKBURN: 'Phone 6581
CARDIFF: 'Phone 2326
CARLISLE: 'Phone 589
CHESTER: 'Phone 21280
COVENTRY: 'Phone 64914
EDINBURGH: 'Phone Central 4234
GLASGOW: 'Phone Central 4595
HULL: 'Phone 32381
LEEDS: 'Phones 20664/5
LIVERPOOL: 'Phone Royal 5202
LONDON—LEYTON: 'Phone Leytonstone 6068
WIMBLEDON: 'Phones 4248/9
MANCHESTER: 'Phone Blackfriars 0596
NEWCASTLE-ON-TYNE: 'Phones 27142 & 27943
NOTTINGHAM: 'Phone 43646
SHEFFIELD: 'Phone 25529
SOUTHAMPTON: 'Phone 71276
STOKE-ON-TRENT: 'Phone Stoke-on-Trent 44021
REPUBLIC OF IRELAND: DUBLIN, 35 Westland Row. 'Phone 66597

SMALL & PARKES LTD., HENDHAM VALE, MANCHESTER 9 *'Phone: COLLYHURST 2511*

WOLVERHAMPTON DIAMOND DIE & TOOL Co. Ltd.

BORTS
and
INDUSTRIAL DIAMONDS
Exporters

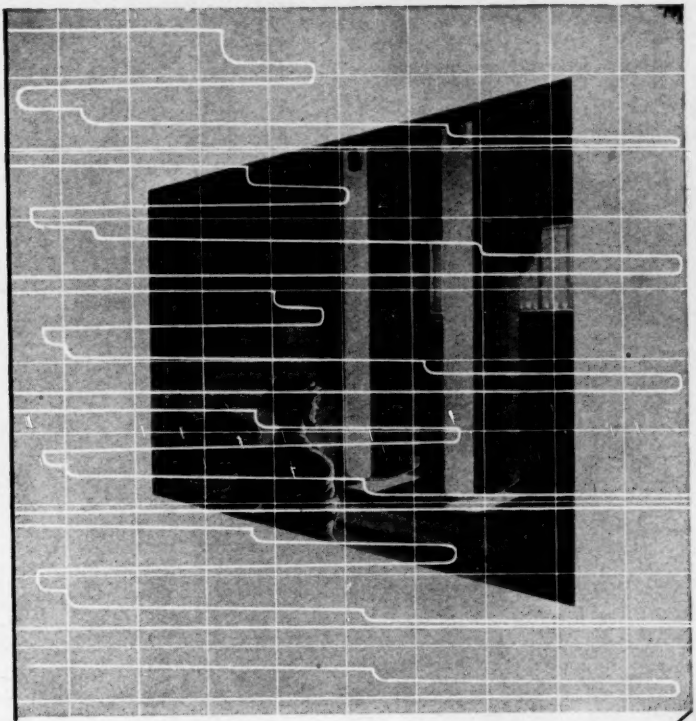
11 HATTON GARDEN, LONDON, E.C.1

Telephone: **HOLborn 3017** *Cables:* **Pardimon, London**

AN ANSWER TO RISING COSTS

"Stream-Line filters enable us to use first grade oil over and over again with a big saving in maintenance charges—increased running efficiency and longer periods between overhauls. 40,000 other users are proving every day the value of Stream-Line filters in the trouble-free operation of diesel engines."

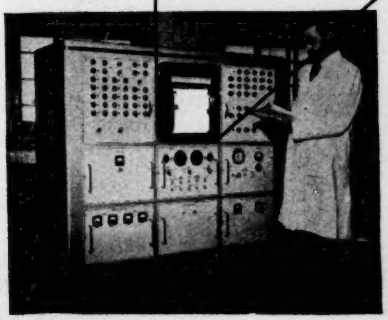
STREAM-LINE FILTERS LTD
INGATE PLACE, LONDON, SW8 TELEPHONE MACAULAY 1011



We don't cast in doubt . . . at T.I.

Before pouring our aluminium billets and slabs in the foundry, every melt is sampled and within two minutes we have a complete analysis, showing the exact percentages of *all* constituents. If there is anything wrong we can correct it then and there—and get another check analysis before we pour. How is it done? . . . Like everything else at T.I.A., by keeping abreast of the latest developments in plant and laboratory equipment. In this case by an entirely automatic spectrographic apparatus called a *Quantometer* — made by Applied Research Laboratories in California—and the only instrument of its kind in this country.

From our point of view, it means that we can send a billet to the extrusion press or a slab to the rolling mill immediately it is cast with absolute certainty that it is to specification; from our customer's point of view it means even greater uniformity in his material; and from any point of view it's another example of what we mean when we say . . .



T.I. ALUMINIUM LTD.,
Redfern Road, Tyseley, Birmingham
Telephone: Acocks Green 3333.

A Tube Investments Company

ALUMINIUM AND ALUMINIUM ALLOY INGOT, SLABS, BILLETS, SHEET, STRIP, TUBES AND EXTRUSIONS TO ALL COMMERCIAL, A.I.D. AND LLOYD'S SPECIFICATIONS.

ORES
METALS
FERRO-ALLOYS

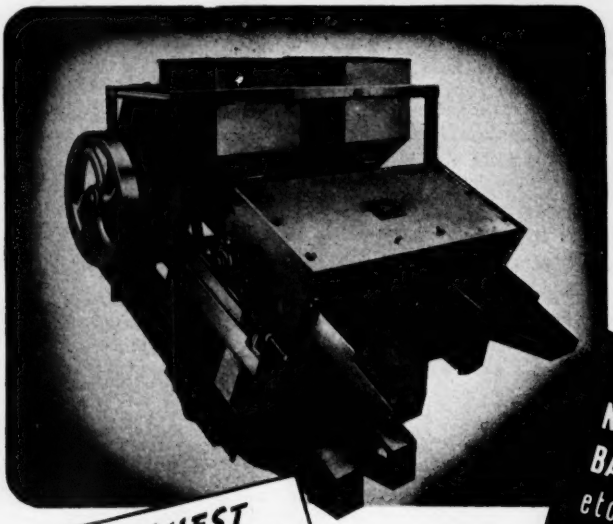
MANGANESE
CHROME
TUNGSTEN
ANTIMONY
TANTALITE
COLUMBITE
ZINC
LEAD
COPPER

Phibro

Philipp Brothers, Inc.

70 PINE STREET · NEW YORK 5, N. Y.

Offices: AMSTERDAM · BUENOS AIRES · CALCUTTA · LA PAZ · MONTREAL · LIMA · TOKYO



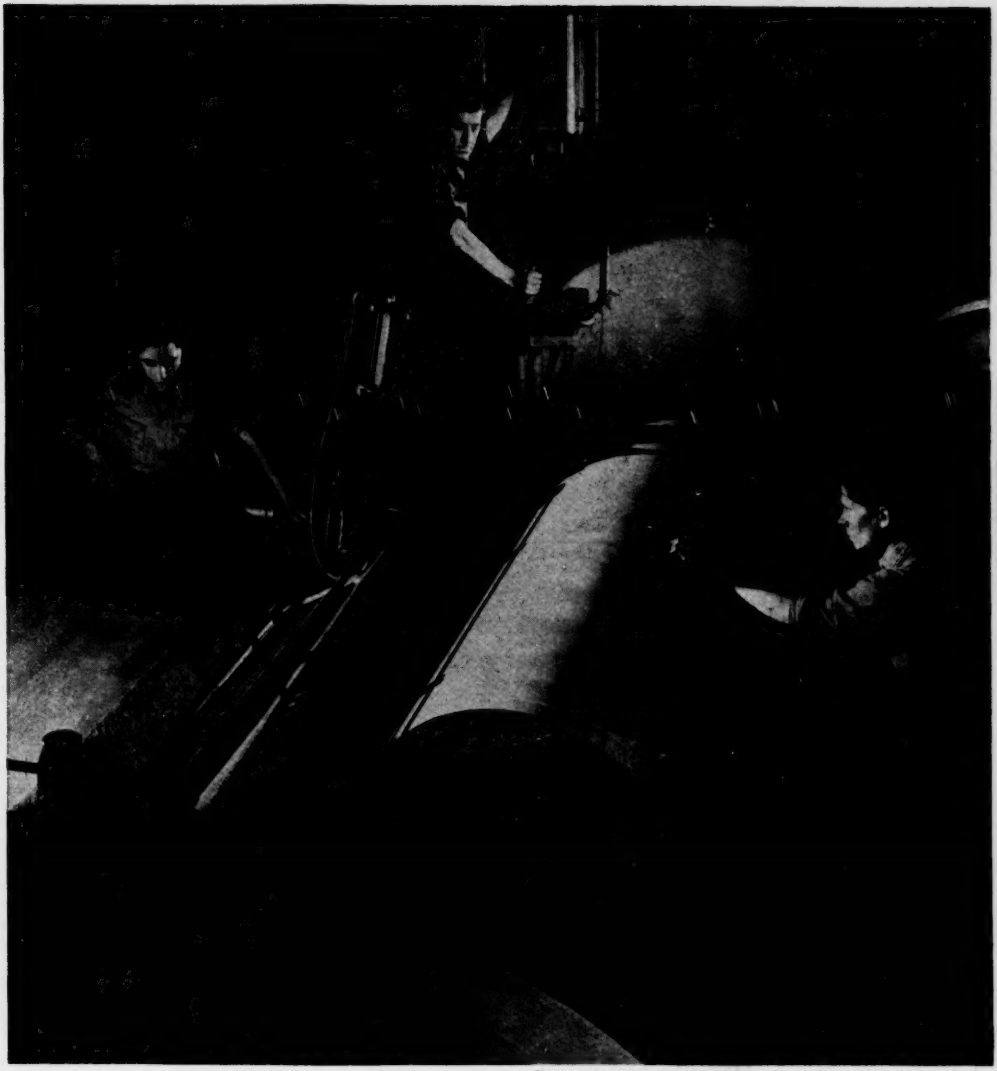
CONCENTRATION *of* MINERALS
BY *Modern Methods*

TUNGSTEN · TIN · CHROMIUM
NIOBIUM · TITANIUM
BASE METALS · RARE EARTHS
etc. etc.
CONCENTRATING TABLES
MAGNETIC SEPARATORS
SCREENING PLANTS

HIGHEST EFFICIENCY LOWEST COSTS

DAVIES MAGNET WORKS
LIMITED
WARE · HERTFORDSHIRE · *Telephone* WARE 489

4MIA



Veneer making by peeling steamed log at Thames Plywood Manufacturers Limited

Vigilance is not enough

IN MACHINE PROCESSES which need constant care and attention, vigilance is useless without instant and complete control over the machine. Smooth, split-second control of all movements, and instant switch-off when things go wrong are essential to speedy, uniform production. Individual electric motors for each machine, with all controls convenient to one man's hands, achieve this end. Electricity used in this way is *electricity used efficiently for greater productivity.*

WHERE TO GET MORE INFORMATION

Your Electricity Board will be glad to help you to get the utmost value from the available power supply. They can advise you on ways to increase production by using Electricity to greater advantage — on methods which may save time and money, materials and coal, and help to reduce load shedding. Ask your Electricity Board for advice : it is at your disposal at any time.

Electricity for PRODUCTIVITY

Issued by the British Electrical Development Association

To some this is just a Vase!

But anyone familiar with ceramics would know that it is a piece of world-famed Delhi blue pottery. Through years of specialised study, the ceramics expert has attained a high degree of skill and discernment in his particular sphere—this is also true of the National Bank of India and its unrivalled knowledge of eastern trading. Many decades have passed since the Bank first served industrial and domestic banking needs in the east and solved the problems of those who traded there. From this continuous and progressive association the National Bank of India can provide much information vital to the success of modern trading ventures. Your enquiries will be welcome at the Head Office or at any of the Bank's branches.

NATIONAL BANK OF INDIA LIMITED

Branches in: INDIA, PAKISTAN, CEYLON, BURMA, KENYA, UGANDA, TANGANYIKA, ZANZIBAR and ADEN. *Bankers to the Government in* ADEN, KENYA COLONY, ZANZIBAR and UGANDA.

Head Office: 26 BISHOPSGATE, LONDON, E.C.2.

These people write from Aracaju

THEIR INQUIRY is interesting. What, however, is their commercial standing? You do not know—but the Westminster Bank almost certainly does. And even if it does not, the facts can quickly be obtained because the Bank has representatives in every town of importance throughout the world. This unrivalled Credit Information service is part of the much wider service which the Bank places at the disposal of all who trade abroad and which is fully described in the booklet "The Foreign Business Service of the Westminster Bank'. A copy will be sent gladly on request.

WESTMINSTER BANK LIMITED

Foreign Branch Office: 41 Lothbury, London, E.C.2

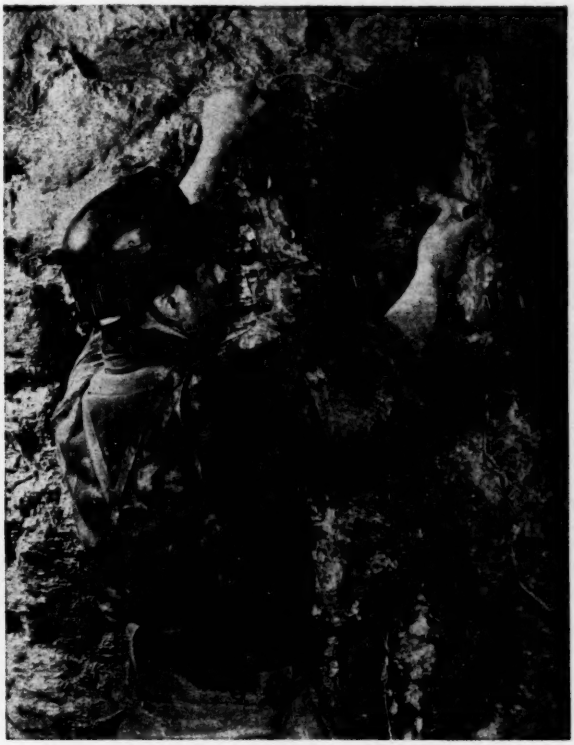
The Mining Journal 1952 ANNUAL REVIEW NUMBER

Summarizes events and statistics of 1951

Will be ready in May

● **Orders for copies should be placed direct, or through Newsagents. 7s. 6d. post free.**

Write: The Publisher, Mining Journal, 15 George Street, London, E.C.4



'NOBEL-GLASGOW' Explosives and Accessories

There is a 'Nobel-Glasgow' explosive for every blasting operation.

Users are invited to apply to the Nobel Division of Imperial Chemical Industries Limited for assistance with their problems.

IMPERIAL CHEMICAL INDUSTRIES LIMITED
NOBEL DIVISION, 25 BOTHWELL STREET, GLASGOW, C.2

ICI

N.44

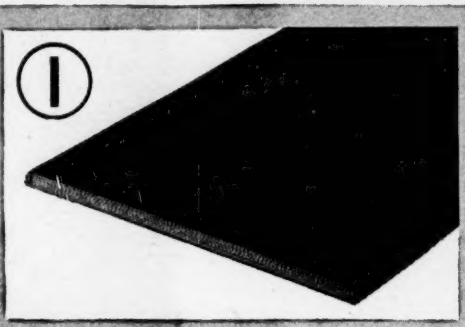
SPECIFY GOODYEAR TRANSMISSION BELTING AND HOSE

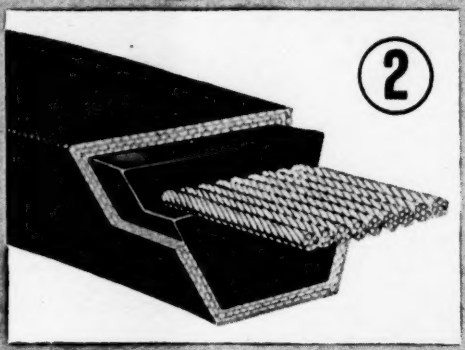
For longer service and lower costs

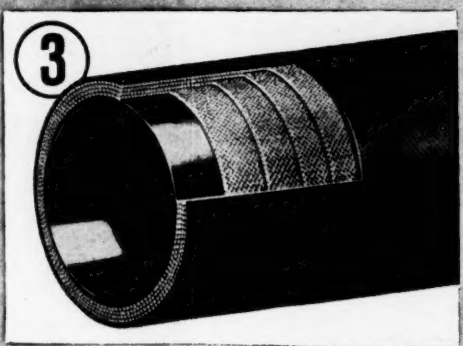
IF YOU'RE in need of industrial rubber equipment, see what 50 years' research and practical rubber engineering can make of a product. Take a look at Goodyear hose, for example. You will find hoses designed for specialised jobs in a range so complete that any requirement can be exactly suited.

If Flat Transmission belting is setting a problem, the Goodyear patent "balanced" endless-cord method, which does away with the splice and practically eliminates stretch, will certainly be of interest. Or Goodyear "Thor" Belts, with their superior fastener-holding qualities, may be the solution.

The Goodyear V-Belt range is available in two types — Cotton Cord for short-centre, high-speed work and Rayon cord for long-centre, heavy-duty jobs. Whatever your installation, Goodyear will give you longer, more dependable service.







1 "THOR" FOLDED EDGE BELTING

Closely woven, hard twist duck provides greatly increased power transmission and improved fastener-holding qualities. Folded fabric edges give protection against moisture penetration and edge-wear. A double coating of rubber between plies makes this flexible, tough and thoroughly dependable belt ideal for heavy, continuous work under all conditions.

2 CORD V-BELTS

Goodyear V-Belts are of uniform accurate cross-section. The load-carrying high-tensile endless cords are in the neutral plane of the belt, where they avoid extremes of tension and compression.

3 WRAPPED PLY HOSE

THIS GOODYEAR HOSE is built from high-grade rubber tube wrapped in tough rubberized fabric for greater strength. A protective cover of bruise- and abrasion-resisting rubber assures lasting wear, and scientific arrangement of the fabric plies minimizes kinking.

GOODYEAR

INDUSTRIAL RUBBER PRODUCTS

TRANSMISSION BELTING • V-BELTS • CONVEYOR BELTING • HOSE

The Mining Journal
Established 1835

Vol. CCXXXVIII No. 6082 LONDON, MARCH 14, 1952 Price 8d

CONTENTS

Notes and Comments ... 263
From Our South African Correspondent ... 265
The Mineral Resources of Jordan ... 266
Rôle of E.C.A. in Development of French Africa's Mineral Resources ... 267
Experience with Lightweight Air Leg Drill ... 269
Correspondence ... 269
Machinery & Equipment ... 270
Overseas Orders for Goodyear Belts; The Blaw Knox BK-80 Scraper; Speed Reducer for Colliery Washeries, Mixing Machines & Agitators; Padley & Venables Opens London Information & Display Centre; Heavy Duty Trucks on the Mesabi Range.
Metals, Minerals and Alloys ... 271
The Mining Markets ... 273
Company News and Views ... 274
Consolidated Mines Selection Maintains Dividend; Petaling Tin Achieves Record Results; Anglo-French Maintains Dividend on Increased Capital; Oroville Dredging.
Company Shorts ... 275
Company Meetings and Announcements ... 276
Petaling Tin; Oroville Dredging; Consolidated Mines Selection Co. Ltd.; Mercantile Bank of India; National Bank of India; Chartered Bank of India.

Published by The Mining Journal Ltd. at 15, George Street, London, E.C.4. *Subscription £2 per annum (post free)*

NOTES AND COMMENTS

The Budget

Although details are not yet available it is to be hoped that this year's Budget may prove memorable for the mining industry, by virtue of the Chancellor's implied acceptance of the principle, so long urged upon his predecessors by the British Mining Overseas Association, that by the wasting nature of their assets, mining companies have a right to certain exceptional tax reliefs.

In selecting the years 1947, 1948 and 1949 as the base years for computing the average standard profit, both for the modified profits tax and the new excess profits levy, the Chancellor is giving all companies showing poor results in any of these years the option of bringing into the average standard profit of the three base years, 8 per cent of their paid up share capital for each of one or two of those years, or 10 per cent for each of the three years. Beyond this, an additional percentage of an as yet unspecified amount will be allowed to mines and oil wells. The Chancellor also proposes to make certain additional before tax allowances to overseas mining companies. The nature and extent of these are also unknown as we write.

Taken together these special reliefs could certainly add up to a recognition of the principle that mining companies' assets are of a wasting nature and that dividends paid to mining investors are, in part, a form of amortization allowance on capital invested. It remains to be seen whether the recognition of these concepts will be largely token, or whether mining companies will receive reliefs commensurate with the nature of the industry.

In the meantime, whatever satisfaction mining men will feel at the reliefs which are foreshadowed, this must be tempered by the choice of the three base years. In the first place, all three years (except for some three-and-a-half months) cover the pre-devaluation period. Secondly, they relate to a time when many mining companies were still going through a period of rehabilitation and reconstruction after (as in Malaya) the damage done by enemy occupation or (as in Northern Rhodesia, Australia and elsewhere) the harm caused by the necessary war time withdrawal of labour from the mines and/or by uneconomic mining through the inevitable emphasis on current production at the expense of development and the maintenance of ore reserves.

In these circumstances it seems less than justice to ask mining companies to take these years of recovery as representative for purposes of profit earning.

However, the Financial Statement indicates that profits will be computed subject to special provisions intended to provide a fair basis of comparison in the standard years. It remains to be seen how far this will assist companies whose capital and scale of operations has increased since 1949.

From the standpoint of the mining industry, at least, it would be unreasonable to be unduly critical of the Chancellor's tax proposals until their effect is known in concrete terms. Mr. Butler's Budget speech, in any event, gives the mining industry the promise of some important recognitions of principle, and if the extent of the concessions are sufficiently large they could go far to disarm criticism.

British Banking in the Far East

The general context of trade within which the great eastern exchange banks operated during 1951 was, in many respects, quite clear. The inflated rise of prices, particularly for primary products, which followed the outbreak of the Korean War, reached its peak near the end of the first quarter of 1951 and was largely responsible for the expansion in profits common to these banks. However, the break in the commodity prices which followed soon after continued their downward trend throughout the year. Indeed, banking activity in financing trade in the East was on a reduced scale before the end of 1951 and Mr. V. A. Grantham, chairman of the Chartered Bank of India, Australia and China, warned the shareholders in his annual statement accompanying the report and accounts for 1951 that they may look for lower profit figures in the future.

On the other hand, the political context within which British eastern exchange banks operated throughout the year in the Far East was confused and Mr. Grantham attributes this to the extensive transfers of sovereignty which have taken place in the East in so short a time. While a revolution on so gigantic scale might have been expected to extinguish Western commercial organizations, that this did not take place was in no small measure due to the new self-governing states realizing the importance

of keeping intact those fiscal institutions which have been built up with such care within their territories over the last two centuries. But if British banking institutions were not seriously affected by the far-reaching changes occurring in the social, political and economic structures of nearly all the Asian lands, the general upheaval, as Mr. Grantham points out, has created a serious administrative problem. This stems from the fact that it is no longer possible to take comprehensive views of the area in which British banks are operating and to formulate policies in the manner formerly possible when there was a large measure of political and economic co-operation. At present, each territory in which the banks conduct their business must be viewed, and to a large extent managed, in isolation from the rest. For while some economic phenomena are common to several of the Asian countries, so widely do their political systems differ that "it would be dangerous to apply the experience gained in one to the solution of parallel problems in another."

Sir Charles Innes, who is retiring from the chairmanship of the Mercantile Bank of India after 19 years of service on the board, asserts in his annual statement, accompanying the report and accounts of that bank for 1951, that in the long view the gravest economic problem in the East is that of food. India, Ceylon, Malaya, and Japan, he says, are all deficit countries in the matter of food and in all of them the population is increasing at an alarming rate. More immediately, the problem to be contended with everywhere in the East is that of inflation. Another aspect of Eastern economic life that impressed him was the way in which international trade was complicated, hampered and distorted by regulations and controls.

Referring to the rôle the U.S. now plays in the international situation, he declared that the way in which American demand conditioned most of the world's commodity markets was one of the outstanding features of the modern world and much depended on that country's policy as to whether the recent fall of prices would be considered as a healthy sign or otherwise.

Mr. J. K. Michie, in his annual statement accompanying the report and accounts of the National Bank of India for 1951, reminds us that the Sterling Area balance of payments gap was clearly foreseen by bankers, if not by governments. This year, his statement was written in the interval between the recent London conference of the Sterling countries called to consider the critical position of the balance of payments for the whole area, and the issue of certain national budgets in which, he writes, the general policy agreed upon at the conference would presumably be reflected. Thus, the decision taken by the Chancellor on Tuesday this week to allow monetary policy to play a more positive rôle in preventing further inflation will commend itself to Mr. Michie, who remarked in his statement that it was surely an anomaly that money, which is a scarce commodity, should be "cheap" while everything else is dear.

Commenting on the outlook for the current year, he felt that while 1952 was bound to be a year of adjustment and difficulty, the National Bank of India would be reasonably successful.

S. Rhodesia's Record Mineral Output in 1951

The value of Southern Rhodesia's mineral production has almost doubled in the past five years and details of 1951 outputs, issued by the Department of Mines on February 6, show a record total value of £15,084,634.

Since the commencement of mining operations, the Colony has produced minerals worth £272,143,989. Last year's gold output, at 486,907 oz. was the lowest for 46 years and comparison with peak outputs of 930,356 oz. in 1916 and 826,485 oz. in 1940 shows the extent and rapidity of this industry's decline since the war. Nevertheless, the value of gold output in 1951, at £6,043,727 (to which must be added £45,559—the proceeds of three months' premium sales), was exceeded in only five previous years.

While the value of gold produced in 1951 showed a decrease of £255,537 compared with 1950, the value of base mineral outputs increased by £1,730,584 to a total for 1951 of £8,969,878. Asbestos heads the list with a total value of £5,452,108 for 77,663 tons of fibre. The weight produced was higher in only one previous year—79,638 tons in 1949—but output was then valued at £3,986,703. Despite continued rail transport difficulties, a higher tonnage of chrome ore was exported than in any year since 1942. The 1951 figures are 330,989 tons valued at £1,530,998. Coal output, at 2,535,449 tons was the highest yet recorded in Southern Rhodesia. Enhanced prices for tungsten concentrates are reflected in the output of 235 tons valued at £293,126. Ninety-five tons of tin concentrates were valued at £57,141. Only 104 tons of block mica were mined last year at a total valuation of £69,844.

Other contributions to the record total came from beryllium ore, £91,841; limestone, £38,554; iron pyrites, £34,087; silver, £25,290; magnesite, £22,441; iron ore, £14,763; and lithium ore, £12,430. Antimony ore, arsenic, barytes, copper, fireclay, fluorspar, kaolin, felspar, bismuth, quartzite and vermiculite added smaller sums and in December 40 ct. of diamonds were declared from newly registeded alluvial claims in the Gwelo district.

Exploring for Coal in Northern Ireland

An item included in the Parliamentary Estimates moved in the Northern Ireland Parliament recently by the Minister of Commerce was £12,500 for mineral exploration. The Minister said this sum was to cover the cost of obtaining additional equipment to deepen a bore for coal at Mire House, near Stewartstown (already taken to 3,500 ft.) to a maximum depth of 5,500 ft. Only one other deep bore (at Dernagh, Co. Tyrone) was in progress at present. These investigations, which were being undertaken by the Northern Ireland Branch of the Geographical Survey, were necessary to clear up the question as to whether or not there was any workable coal in South Tyrone. If coal measures were proved by either of these bores, particularly the one at Mire House, they would be greatly encouraged to continue exploration in the district. If, however, the results of the bores were negative, they should clearly have established that further exploration in South Tyrone would be unwarranted, in as much as it would then have been proven either that coal was not present outside the limited area already worked or that, if present, it was situated at unworkable depths.

Hydro-Electric Development to Serve Turkey's Mining Areas

The International Bank for Reconstruction and Development has decided in principle to participate in the financing of the hydro-electric station and irrigation dam for the Seyhan area in Southern Turkey—a project of major significance that will serve Turkey's most important industrial and mining areas. This project is included in plans for the electrification of Turkey which will cost an estimated £50,350,000 and cover some seventeen installations. One of these is the hydro-electric station and dam at Lake Hazer near Elazig in Eastern Turkey which will supply electricity to a wide area which contains large deposits of copper and chrome ore (the Ergani and Güleman mines) and also to serve to irrigate the Ulu Valley, potentially one of Turkey's most fertile cotton and grain-growing centres. Others are situated between Egridir and Isparta; at Sizir bteween Sivas and Kayseri; and between Tortum and Erzurum.

South Africa

(From Our Own Correspondent)

Johannesburg, March 4

During the past few weeks there have been indications of further important developments in the field of uranium production in the Union. Owing to the fact that the Atomic Energy Act, which was hastily passed by the former Government when the potentialities of the Union as an uranium producer were first realized, contains such stringent security measures that the mere mention of the word "Uranium" carries with it a possible penalty of five years in jail and/or a fine of £20,000, it is only by piecing together the various statements authorized by the Minister of Mines that any kind of picture at all can be drawn of what is actually taking place.

BACKGROUND TO URANIUM PRODUCTION

The initial move was to allow, at first, six mines to undertake production of uranium from slime residues and work was put in hand for the erection of the necessary plant. Towards the end of last year, representatives of the U.K., U.S. and South African Atomic Energy authorities met in Pretoria. As a result of their discussions these six companies were asked to increase the capacity of their uranium plants, and it was recommended that a number of other mines should be asked to become uranium producers. Subsequently it was announced that the capital required for the implementation of the whole scheme would come from British and American sources, as the magnitude of the plans makes it impossible for them to be financed internally. It was also proposed that a central treatment plant should be erected on the Rand to prepare the concentrates from the various sources into a form suitable for export.

The present potential producers are Blyvoor, Daggafontein, Western Reefs, West Rand Consolidated, West Driefontein and Stilfontein. West Rand Consolidated is expected to bring its plant to the production stage during the second half of this year and the others during 1953. In addition to uranium, Daggafontein and Western Reefs are to produce the sulphuric acid necessary for the recovery of the concentrates. West Rand Consolidated has, for some years past, produced pyrite for the production of sulphur.

As can be imagined, there is considerable speculation here as to which of the other mines will be brought within the ambit of the scheme. But the authorities, both in Government circles and in the mining industry, remain silent on this point. It would appear, however, to be a reasonable assumption that the most likely properties to be selected are those handling large tonnages of ore from the upper reefs.

A further result of the Pretoria meeting was that the mining companies are to receive a higher price for uranium than was originally anticipated, although it will still be fixed on a cost-plus basis.

CRITICISM OF ATOMIC ENERGY ACT

The Atomic Energy Act is coming under severe criticism on the grounds that it is making it virtually impossible for smaller companies to take any steps to exploit potential sources of radio-active materials. According to various geological authorities, deposits of this nature do exist in the Union, although little is known about them as yet. It is not very difficult to obtain the necessary prospecting licence to investigate these areas, but after that the small company's troubles begin.

Under the Act it is an offence to disclose any information, with the result that private undertakings, without appreciable financial resources, are precluded from raising fresh capital since they cannot approach the public. The view here is that the Act needs amending along the lines of that existing in America where every encouragement is given to prospecting for radio-active minerals, and security measures only come into effect at levels where there is danger of essential information being disclosed.

IMPORTANCE OF PYRITE RECOVERY

Apart from uranium production, it looks as if pyrite recovery will prove one of the more important by-products of the gold mining industry. The world sulphur shortage is hitting the Union particularly hard. The soils of this country are deficient in phosphates, and agriculture depends to a great extent on the quantities of superphosphate made available. Rock phosphate is available in relatively large quantities, and the Government has recently taken over large deposits in the North-Eastern Transvaal which will be exploited in co-operation with the I.S.C.O.R. organization—the State iron and steel works.

The allocations of raw sulphur, however, are well below requirements and the first step towards improving the situation has been the decision of African Explosives to convert its sulphuric acid works from a sulphur burning basis to the utilization of iron pyrite.

Experiments on the extraction of FeS_2 on a large scale from Witwatersrand ores have also been undertaken. Some ores contain as much as 5 per cent pyrite, and the Government Metallurgical Laboratory is of the opinion that production would be justified from a cyanide residue containing as little as 2 per cent FeS_2—any gold recovered from the concentrate of course adding to the profit.

A SIGNIFICANT DEVELOPMENT

Another significant development is that a pilot plant erected on a West Rand mine for the flotation of the current cyanide residue on a semi-continuous scale gave more than 90 per cent recovery of pyrite, and a cleaned concentrate with approximately 42 per cent sulphur. It is estimated that a plant to treat 100,000 tons of slimes a month to recover 3,600 tons of pyrite would cost approximately £120,000 and would yield a gross profit of about £2,400 tons a month.

Calculations by the Rand Mines Central Mining group are that the mines of the group discharge nearly 14,000,000 tons of slimes a year, which have an average FeS_2 content of 1.42 per cent, equivalent to 105,218 tons of sulphur.

WEST DRIEFONTEIN MAKES A GOOD START

The main event of last month was the official starting up of production at West Driefontein, after a series of trial runs of the mill during January. Although only development and rock ore from surface dumps was put through during February and the usual absorption of gold took place, the maiden declaration at the end of the month reflected a profit of £3,722. This good start can well be regarded as an augury of what is to come from this property.

The ceremony of pouring the first bar of gold was attended only by those men who had contributed to the opening up of the mine. Once it gets into full swing, the new Free State properties will be hard put to beat its production, in view of the virtual 100 per cent payability it has shown since the start of development operations in 1947.

The Mineral Resources of Jordan

By A. M. QUENNELL

The quarterly bulletin of the *Colonial Geological Surveys* (Vol. 2, No. 2) contains an illustrated article on "The Geology and Mineral Resources of (former) Trans-Jordan," contributed by A. M. Quennell, formerly Assistant Director, Department of Lands and Surveys, Trans-Jordan. In view of the increasing importance of the countries of the Middle East, and considering the fact that this article is the most recent appreciation of the commercial potentialities of the mineral resources of Jordan, the following extracts from Mr. Quennell's paper assume more than topical interest.

Trans-Jordan is the uplifted block to the east of the Dead Sea Rift Valley. The rocks are in general progressively older from north to south. They are well exposed in the Rift slopes. The sedimentary rocks, mainly terrestrial from Cambrian to Middle Cretaceous, and marine to Lower Eocene, rest on the planed surface of the pre-Cambrian Basement. Since Lower Eocene, the only new rocks are terrestrial or lacustrine. A complex system of faults and folds, nearly all associated with the late Tertiary and Quaternary Rift faulting, has been elucidated to give a fault and fold pattern suggesting north-west to south-east directed tangential stress.

The minerals which can be worked as transport and market conditions improve include phosphates, cement-making materials, gypsum, and building and decorative stone. There is the possibility of finding mineral oils, and the bituminous chalks may be capable of being exploited. With regard to metallics, copper, which was mined by the ancients, should be prospected, and manganese may become economic. There are small deposits of high-grade iron ore. The mineral resources also include the salts of the Dead Sea waters, which are processed by Palestine Potash, Ltd.

METALLIC MINERALS

Because of the mining and smelting of copper in the Wadi 'Araba in ancient times, the possibility of finding copper ore has attracted attention but search has failed to reveal any ore deposits which would be of interest at the present day. The ore used was cupriferous sandstone, apparently the Lower Quweira sandstone. Very selective mining was carried out by the ancients, chiefly in the vicinity of Feinan. The presence of copper does, however, suggest that prospecting of the Quweira sandstone and also of the 'Aqaba Granite Areas should be pursued. Indications of copper in an intrusive body have been discovered, and this prospect is being further investigated

Small deposits of haematite ore were worked in ancient times, notably in Wadi Sabra, 7 km. S.S.E. of Petra, and at sites between the Dead Sea and Feinan. These were, however, probably enriched haematite deposits and do not represent anything of economic interest. The Crusaders worked iron near 'Ajlun at Tel Ekweder. Although one sample showed a high haematite content, the quantity indicated does not warrant attention as a source of iron ore.

Manganese occurs in and above dolomite in the Wadi Dana. The ore is pyrolusite and psilomelane with much iron. It is not a good manganese ore and the area is so inaccessible that it is unlikely to prove economic. However, manganese should be borne in mind in any prospecting operations.

NON-METALLIC MINERALS

Extensive deposits of phosphates in the form of calcium phosphate, $Ca_3(PO_4)_2$, are found in many localities. The most important is at Er Ruseifa, east of Amman. Here, however, mining is made difficult because the beds are involved in the minor folding of the chert-limestone formation. There are from two to four beds of "hard" and "soft" phosphate, totalling between 4.4 metres and 5.9 metres in thickness, and averaging better than 70 per cent $(Ca_3(PO_4)_2$. The thickness and quality are remarkably consistent over a considerable area and there has been considerable development work by the Trans-Jordan Phosphate Co.

Other occurrences lie between Zarqa and Naqb Ishtar. Most of them are close to the railway, although one lies on the Amman-Salt road. The most important is close to Hasa Railway Station, where the phosphate is pulverulent and has a total thickness of five metres in four beds. The grade is about 50 per cent $Ca_3(PO_4)_2$. The phosphate horizon has a wide distribution in this area. Some prospecting has been done.

These plateau phosphates deserve thorough investigation. It is probable that deposits equal in thickness and quality to those in the Ruseifa area will be found in areas uncomplicated by minor folding. It is also probable that in some favourable localities they could be mined by open-cast methods. The requirement for profitable working is cheap transport to a port. If it proves practicable to continue the railway to 'Aqaba, the future of the industry is assured.

Gypsum occurs in many minor deposits in rather inaccessible localities, but has been worked on a small scale some 10 km. south-east of Azraq. The mineral is also found in the Zarqa Group in the Wadi Zarqa. The most important deposit is in the Edh Dhira' fold. The gypsum occurs in pure form as a bed up to two metres thick, and there are probably some millions of tons present. Mining would have to be by underground methods and transport may create difficulties.

There are unlimited quantities of all the materials required for the manufacture of portland cement—except fuel. The building stones of Trans-Jordan are principally limestones and the granites and porphyries of the 'Aqaba Granite Complex would, if transport were economic, furnish excellent decorative material. Marbles are found near Mushetta and on both sides of the railway for 15 km. south of Jiza. They are exceedingly beautiful stones, of all shades of red and green. Attempts have been made to establish an export trade. Clay suitable for making pottery exists to the west of Suweileh, some of which was exported to Palestine during the last war.

BITUMINOUS LIMESTONE

The most important deposits of bituminous limestone or bituminous chalk are found adjacent to the Wadi Yarmuk in the north. They extend into Syria. Other beds of the same age have been found in almost every well drilled along the railways as far south as Jebel 'Uneiza (35 km. north of Ma'an), and surface outcrops have been noted, but nothing approaching the Yarmuk deposits in thickness or quality has been discovered. The deposits overlie the chert-limestone group of the Belqa Series. East of Irbid, these beds dip gently to the north or north-east. Erosion by the Wadi Yarmuk and by its tributaries, especially the Wadi esh Shellala, has exposed them. They are also present in the Wadi el 'Arab.

The material was subject to tests by the Fuel Research Station, which reported that the chloroform and pyridine

extracts were 1.1 and 2.8 per cent respectively, whereas the loss on ignition (less CO_2) was 23 per cent. Destructive distillation under the most favourable conditions yielded 17 per cent of "crude oily extract." Whether the area is worth prospecting depends on the availability of petroleum products from other sources. During the 1914-1918 war, German engineers erected a plant for the distillation of petroleum.

The material is burnt for the production of quick-lime. It is mined and built into rough kilns and fired. There is sufficient fuel in the limestone to complete the process of "burning" even under these crude conditions. A grey quick-lime of good quality results, and is used for building purposes. It appears that a more efficient method of "burning" could be devised. Furthermore, there is the possibility of using this material in cement manufacture.

The Iraq Petroleum Co., through Petroleum Development (Trans-Jordan) Ltd., began a study of the possibility of oil-occurrence in 1946. On general grounds oil, if it exists in Trans-Jordan, is likely to be found only in localized occurrences under favourable conditions. Except for the bitumen occurring along the Dead Sea shore, there are no recorded gas or oil seepages. Source beds low in the sequence have not been discovered. There remain, however, two areas worthy of special attention—the Dead Sea Rift area and the Wadi Sirhan.

Jordan is a country which is well-off as regards the non-metallic minerals necessary for the development of a country where industry is primarily agricultural. It has building materials in abundance, and only capital, transport, and markets are required for their proper exploitation.

With regard to the metallic minerals and fuels necessary for heavy industry, the potentialities are unknown. Such possibilities as do exist have not been investigated to the point at which a final answer can be given.

The Rôle of E.C.A. in the Development of French Africa's Mineral Resources

By Dr. MAURICE MOYAL

United States Aid in the shape of men, money and machines for the development and exploitation of mineral deposits in countries this side of the Iron Curtain has been one of the most fruitful projections of the American stockpiling programme. Much publicity has been given to the assistance received through the former E.C.A. organization to mines in the British Commonwealth and Empire, but little has been said in any detail of the help which E.C.A. has given to develop potential sources of strategic minerals in other parts of the world. In the following article, Dr. Moyal describes at length the rôle American aid is playing in the development of France's overseas mineral resources—mineral resources which may well prove to be a decisive factor in the struggle for strategic materials should a third world war take place.

That one of the world's largest unexploited sources of mineral wealth lies beneath the sands, forests and jungles of French Africa is a belief which will soon be subjected to a severe testing. Loans from the former E.C.A. organization have swelled the total amount of public and private funds flowing into French Africa from Metropolitan France in the post-war years, with the result that not only are the plans for the expansion of production from existing mines being rapidly fulfilled but also a start has been made in geologically mapping these vast areas so that in the not too far distant future a comprehensive picture of its mineral wealth will be available.

DEVELOPING CONAKRY IRON ORE DEPOSITS

Perhaps the most important single project in French Guinea to benefit from American aid is the development of the large Conakry iron ore deposits which have long been regarded as one of the world's largest sources of lateritic ore. These deposits are estimated to contain between 3,000,000 and 5,000,000 tonnes of ore, having an Fe content as high as 51.5 per cent and are being worked by the Conakry Mining Co., which has obtained a 50 years' concession from the French Government for this purpose. The deposits are made up of a crust of "hard" ore, six to ten feet deep, overlaying a second layer of "soft" ore extending in depth for at least another 30 ft.

Immediately prior to the late war, about 40,000 tonnes of Conakry ore were shipped to the Ruhr, the Saar and to Belgium for blast-furnace tests which proved highly satisfactory. More recently, 12,000 tonnes were tested in this country, but otherwise, no sizeable shipments have been made. However, according to plans which are now being carried out, it should be possible to ship large quantities to the main iron ore importing countries of Europe, including the U.K., and to the United States from the end of this year. British interests, it is understood, intend to buy a minimum of 500,000 tonnes of Conakry iron-ore per annum, which may be increased to as much as 1,000,000 tonnes eventually. Ruhr steel producers will take up some 600,000 tonnes yearly, and steelmakers in France, the Benelux countries and elsewhere, have also expressed their interest.

An E.C.A. grant of nearly $2,000,000 was used to purchase mining, earth moving and loading equipment as well as pneumatic drills, electric shovels, heavy trucks, tractors, a ten ton wrecker and other equipment, accessories and spare parts. While these items were purchased in the United States some of the equipment such as railway cars, locomotives, diesel engines and structural steel will be purchased from France, from the U.K., and from other Marshall Plan countries. The Conakry Mining Co. estimates that the total cost of the project (in dollars and francs) will be equivalent to $6,775,000, although this sum does not take into account the cost of the port expansion.

To enlarge and equip the port of Conakry, over $5,000,000 in direct Marshall Aid and Fr. 97,000,000 from counterpart funds have been provided. Dredging operations are being carried out with a view to deepening the port to take ships with a draught of up to 32 ft. A special ore loading dock is also under construction and with the automatic loading equipment obtained through the E.C.A., ships of 10,000 tons can be loaded in six-and-a-half hours or less, thus providing a quick turnround. This is an essential part of the scheme for a large number of liberty ships, idle since the end of the war, are being re-commissioned to deal with the anticipated ore traffic which is expected to reach 500,000 tonnes this year, 1,200,000 tonnes next year and 3,000,000 tonnes per annum thereafter.

BAUXITE IN FRENCH GUINEA

The occurrence of bauxite in the form of aluminium tri-hydrate in French Guinea has been known for years but, up to 1940, only the rich deposits of the port of Conakry had been worked on an experimental basis.

One of the limiting factors restricting the expansion of production in French Guinea before the war was that demand for bauxite from Europe could be met from French Metropolitan production. While this is still true, the need to feed the growing aluminium industry of Canada, together with the requirements of the United States for refractory grade bauxite have expanded potential market horizons considerably and a good deal of development work has, in consequence, been carried out on these deposits in the last few years. Indeed, the growing demand for bauxite has led the Société des Bauxites de Midi, which holds the Guinea Concessions, to enter into partnership with the Aluminium Laboratories Ltd., of Canada for the exploitation of the Guinea bauxite deposits.

The Loos Island deposits, which are close to the surface, are very easily worked and an enriching plant is being built on Kassa, the largest island in the Loos Archipelago. Funds provided by the E.C.A. have been used to further the work on the Kassa installations which is now well under way (including housing for the personnel, shops and warehouses). Furthermore, much of the heavy mining equipment has arrived on the property and actual mining is in progress.

Rich bauxite deposits have also been found inland from Boké, on the coast near the border of Portuguese Guinea, where extensive sample drilling operations on the plateaux above the Cogan Valley are being carried out. At Dabola, 250 miles North East of Conakry, on the Kankan Railway, other bauxite deposits are being explored by the Société Péchiney.

FRENCH GUINEA'S INDUSTRIAL POTENTIALITIES

Although French Guinea is poor in coal resources, it has potential sources of hydro-electric power and it may be that one day it will become one of the greatest industrial areas on the African continent. Lying at Conakry's doorstep, the well watered Fouta-Djalon range of mountains rises to more than 5,000 ft., and to facilitate the exploitation of the Conakry region it is planned to build a hydro-electric plant on the Konkuré River. A similar scheme is being planned to support the potential growth of Dabola and the Bafino River is to be harnessed to supply power to the prospective mining ventures.

In French West Africa at Fort Gourand, Mauretania, huge deposits of high-grade iron ore have been found and the British Iron and Steel Federation has entered into partnership wtih French and Canadian interests to prospect and explore the area. The ore extracted is to be shared in equal parts between France and Great Britain, Canada taking only a financial interest in the new mining venture. However, it might take years before the iron ore will be forthcoming, for transport of the ore will call for the construction of a special railway, the shortest route lying across the neighbouring Spanish territory of Rio de Oro, up to Villa Cisneros on the Atlantic.

Other mining projects in French West Africa have also received Marshall Plan Aid over and above Fr. 3,679,000,000 in counterpart funds. E.C.A. mining equipment is being used for drilling ilmenite and zircon beach sand deposits near Dakar, for gold mining on the Ivory Coast; while the phosphates mines of the Société Péchiney, near Dakar, have been allocated about $1,160,000 worth of compressed air equipment and other machinery.

The mineral resources of French Equatorial Africa, which stretches over 1,150,000 sq. miles from the Atlantic to the Sudan, are believed to be even greater than those of French West Africa, but a geological map is still almost a blank; approximately half the territory is covered by tropical forests; it is infested by the Tsetse fly and the climate ranks amongst the worst in the world. Notwithstanding these difficulties to develop the region, preliminary investigations have shown that it possesses most of the known minerals with the exception of tungsten; actual gold and diamonds are already mined on a fairly large scale and copper, lead and zinc deposits are also being worked. In the Cameroons, tin and columbite-tantalite resources, similar to the rich deposits of the neighbouring territory of Nigeria, are beginning to be systematically explored and production of these important metals is increasing rapidly.

EXPLORING FRENCH EQUATORIAL AFRICA'S MINERAL RESOURCES

The development of French Equatorial Africa's existing mines, and exploration programmes for new deposits have received considerable aid from the E.C.A. Thus, industrial diamond output is being boosted through substantial E.C.A. advances to two diamond-mining firms, the Compagnie Diamantifère et Aurifère de la Haute-Sangha, whose concession covers 28,000 sq. kilometres north of Dolisio, in the Gabon and Middle-Congo territories; and to the Compagnie Minière de l'Oubanghui Oriental, whose concession covers 22,500 sq. kilometres in the Eastern Oubanghui territory. The latter company was granted advances of $500,000 in direct Marshall Aid and Fr. 385,310,000 in counterpart funds, while the former obtained Fr. 140,000,000 to explore new fields located in dense tropical forests about 600 miles from the Atlantic Ocean.

If the exploration is as successful as is expected, the U.S. and the mining ventures concerned would consider an extensive development programme. In that case, the U.S. would advance another Fr. 166,250,000 for diamond production. This portion of the advance, together with the initial capital invested, to be repayable in industrial diamonds or possibly in some other material of interest to the United States. Should industrial diamond production begin on these Concessions it would be accomplished by placer operations. But before actual production can begin, tractors, bulldozers and other heavy machinery must first be used for clearing the forests.

Exploration and development of copper, zinc, lead and uranium have also been financed in part by the Marshall plan under a similar arrangement; E.C.A. advances being repaid in the form of metals for the U.S. stockpile in the event that exploration is successful. Contracts concluded have provided for a $4,200,000 advance in direct U.S. aid and Fr. 650,000,000 in counterpart funds for a programme to explore a wide area in the Niari river basin, in the Middle Congo territory, in which there are promising indications of mineral deposits. If their value is proved, further U.S. grants will be given. This exploration work is being undertaken by the Société Minière du Niari and Explorations Minières du Congo, two companies in which private French interests and the Office of Overseas France (a Government agency for the development of mines) are associated with the Newmont Mining Company of New York.

Although the E.C.A. has made an indispensable contribution to the development of all the projects aforementioned, it must be borne in mind that this aid constitutes only a small part of the total funds devoted to the development of both French West and Equatorial Africa. For under the terms of the Ten Year Development Plan, which is a colonial counterpart of the Monnet Plan, some Fr. 150 milliards are being appropriated each year by Metropolitan France for this purpose, in addition to the large investment programmes of private companies. In any event, French Africa's resources of strategic materials are invaluable to the whole free world and in the case of an emergency, they may well become an important, if not decisive factor.

Experience with Lightweight Air Leg Drill*

By R. W. ADAMSON

In the following article, the author, who is attached to the staff of the Ingersoll-Rand Co., New York, deals principally with the use of Jacklegs in American mining practice and after describing them in some detail he attempts to draw some conclusions as to where they can be profitably applied.

Often standard methods of drilling at the rock face are born again when they re-appear in modern mining practice combined with an important new invention and are accepted as a completely original style. Currently, air leg drilling is in style in American mines, and consequently attracts those mine operatives interested in exploring the efficiency of the Jackleg as currently utilized underground in that country.

In its basic construction a Jackleg is a stoper equipped with a hinged joint, and hence has a wide scope in its drilling of holes at the horizontal and the near horizontal. Since the development of the small tungsten carbide insert bit, Jacklegs have been utilized for drilling in places not easily accessible to rigidly mounted machines.

The direct and reverse pneumatic feeds common to all stopers are also applied to Jacklegs. In the direct feed system, the Jackleg is attached to the cylinder and moves with it in the conventional stoper feed manner. Under certain conditions this is disadvantageous, as the piston cannot be readily pulled up to advance the machine in following a long steel change. Nevertheless the direct feed Jackleg is popular owing to its simplicity and low initial and maintenance costs. Widely used where plain breast holes predominate, it operates to a 55 lb. class Jackhammer using 1¼ in. Carset bits.

In the reverse type feed, the Jackleg is attached to the end of the piston rod and the cylinder remains stationary. This is a more versatile machine than the direct feed. It can be advanced by means of the cylinder handle without consideration of the position of the feed piston. The throttle valve gives control of feed leg pressure in 5 lb. increments, and finally, the reverse feed Jackleg is manufactured in feed lengths of 2, 3, and 4 ft. with cylinder bores of 2 in. Extension legs of the same length are frequently used. It is necessary to control feed cylinder pressure in both types of Jackleg.

PROGRESS IN JACKLEG DESIGN

Current improvements in the design of Jacklegs minimize the physical exertion demanded of operators. The utilizing of aluminium alloy tubing reduces the weight of the overall assembly by approximately 18 lb., and a more thorough enquiry into the method of attaching the Jackleg to the Jackhammer revealed that it was possible to attain simpler, lighter and more balanced construction by attaching the leg to brackets extending from the backhead out under the cylinder. By this means the strain is divorced from the Jackhammer side rods with the resultant benefit that the assembly is streamlined. Hence there follows an improvement in the arm cradling qualities when collaring holes.

So far as the Jackhammers themselves are concerned, 45 lb. class machines are generally used in conjunction with Jacklegs, although 55 lb. class machines are preferred where hole placements do not require fatiguing manipulation. There has been noted no significant difference in four point Carset bit life in conjunction with either class of Jackhammer.

Because the chuck of a Jackhammer is subjected to a greater wear in Jackleg work than in the down hole work for which it was designed, yoke-type steel holders with ⅞ in. x 4¼ in. hexagon shank chucks are used in the great majority of Jackleg drilling. There is reason to believe that still longer shanks could be used to advantage with the Jackleg combination where the added weight will not prove objectionable. A Jackhammer used with a Jackleg should have additional air admitted to the front end to keep the cuttings from entering the chuck.

BITS WITH JACKLEGS

A high rate of drilling speed is normally the crux of success in the Jackleg drilling method, and is best obtained by the use of small-diameter tungsten carbide-insert drilling media. It is interesting to note in the history of Jackleg development that the construction, attachment and design of the tungsten carbide in relation to the drill rod are still controversial questions. But whatever the tools supplied, it is an established truth that mining skill and exertion play a vastly important part in Jackleg drilling.

The final conclusion can be drawn that the Jackleg drilling system in conjunction with tungsten carbide insert bits, is a valuable addition to current rock drilling methods. Its efficiency and application to stoping systems should be considered, especially for any particular working that calls for slabbing holes which have not necessarily to be accurately placed.

In addition, the Jackleg is ideal for the lesser underground tasks such as the drilling of small development headings, slashing, trimming, and drilling skip pockets. It would prove an excellent investment for smaller operations performed with a limited working capital and resourceful labour that needed the means to accomplish fast and varied rock drilling.

*Adapted from a paper by R. W. Adamson, Ingersoll-Rand Co., New York. Presented at the 1951 Metal Mining Convention, Western Division, the American Mining Congress, Los Angeles, California.

Correspondence

To the Editor, *"Mining Journal."*

Dear Sir,

In your issue of February 22 there is a most interesting paper by Mr. Robinson on Developments in Heavy Media Coal Washing Plant. In the first part of this paper reference is made to magnetic recovery and control of magnetite suspensions and it is suggested that these developments are due to Dr. Vogel and to the engineers of the Nelson Davis and Link-Belt companies.

We would point out that, in fact, the original work in the field was done by Mr. H. H. Wade in the United States, whose patent No. 2206980 covers the use of magnetic media in the preparation of heavy suspensions and the recovery of these media by magnetic means. The floculation and dispersion steps were due to Rakowski, Holt and Arms and were originally protected by U.S. Patent No. 2325149.

Yours very truly,

CYANAMID PRODUCTS LTD.

K. A. Fern, *Chief Metallurgist.*

Bush House, Aldwych,
London, W.C.2.
March 3, 1952.

MACHINERY AND EQUIPMENT

The Blaw Knox BK-80 Scraper

The Blaw Knox BK-80 Scraper of 11 cu. yd. capacity for operation by crawler tractors of 80 h.p. is stated by its makers in a recently published leaflet to be a thoroughly field tested machine incorporating features resulting in a high level of operating efficiency.

The scraper, which is twin-cable operated, is light in weight, ensuring maximum utilization of tractor power for the task of loading and hauling, while the action of its 8-ft. 3-piece cutting edge, designed to promote efficient "boiling" of the spoil, gives heaped capacity loads in the minimum loading time. Another feature is the tubular yoke construction. This reduces the overall length, allows full front wheel clearance and gives a short turning radius as well as good weight distribution over all four wheels which are fitted with giant "earthmover" tyres.

The scraper's patented tailgate design has a positive ejection actuating arm—also patented—which gives a central thrust to the rear of the tailgate thus eliminating wear caused by side thrusts. When the load is greatest the tailgate is in the rearward position and is the point at which maximum forward thrust is applied so that easy discharge and accurate spreading of the material is effected. In this connection, it is pointed out that the apron rises to its fullest extent before the tailgate commences its forward movement.

Abridged specifications are:

Capacity—Struck	8.3 cu. yd.
Capacity—Heaped	11 cu. yd.
Dimensions:	
Length	29 ft. 5 in.
Width	9 ft. 4 in.
Height—with bowl lifted	10 ft. 5 in.
Shipping Dimensions:	
(Dismantled—in one piece)	16 ft. 7 in. x 9 ft. 2 in. x 8 ft. 0 in.
Width required for non-stop turn	25 ft. 10 in.
Maximum ground clearance:	
Rear of bowl	15½ in.
Front axle	18 in.

Overseas Orders for Goodyear Belts

The past year has seen an increasing use of British-made Goodyear conveyor belts in U.K. mines; at the same time, overseas demands for the conveyor belts made at the vast Wolverhampton factories of Goodyear also considerably increased. Among these foreign orders was a purchase by the Nitrate Corporation of Chile Ltd., of conveyor belts (1,500 ft. of 36 in. 6 ply, and 1,000 ft. of 24 in. 5 ply), for service in Tocopilla. Both were heat resisting conveyor belting, Goodyear style 6740, for carrying hot nitrate of 140° and 150°C.

Concurrently with this order, Goodyear supplied the Nitrate Corporation of Chile with 300 ft. of elevator belting, 21 in. wide with 6 plies of 32 oz. duck. Both covers were 3/32 in. thick. This belt is known as the Style CE, Goodyear's top quality belting for bucket elevators.

Goodyear also supplied the Mining Equipment Corporation of New York with three belts totalling 1,436 ft. of 30 in. by 5 ply stacker belting with 32 oz. carcass ¼ in. top cover and 1/16 in. bottom cover. These belts were for service in Paramaribo, Surinam, Dutch Guiana. In the same order, the company supplied 516 ft. of 24 in. 5 ply 32 oz. stacker belting and 450 ft. of 24 in. 4 ply style 6740 belting, i.e. of the same type sent to Tocopilla for the Nitrate Corporation of Chile. An outstanding feature of this order was a small roll of 100 ft. of 54 in. by 7 ply 28 oz. stacker belting. Although this was the widest supplied during the year, it does not represent the maximum capacity of the press at the company's Wolverhampton factory.

For handling bauxite in British Guiana on a stockpile conveyor Goodyear shipped 2128 ft. in one length of 30 in. 6 ply stacker belting. This belt had 32 oz. duck 1/8 in. top cover and 1/16 in. bottom cover.

Padley & Venables Opens London Information and Display Centre

Padley & Venables Ltd.—incorporating Rip Bits Ltd.—announce the opening of a London office at 66, Victoria Street, London, S.W.1, under the management of Mr. E. A. Martin from the Sheffield Works. The principal function of this office—which will house a permanent display of products—is to provide a centre for information relating to technical and commercial questions of interest to the industries served by the Group, which comprises the following works and products:

Padley & Venables, Ltd., Hill Street Works, Sheffield 1.—Percussive and rotary drilling and cutting tools for use in all makes of pneumatic, electric and petrol operated machines for coal and ore mining, quarrying, foundries, and civil and constructional engineering.

Padley & Venables, Ltd., Suprex Works, Livery Street, Birmingham.—Stainless steel sheets, strip, bars, tubes and sections in all finishes, including de-scaled bright or dull polished.

Rip Bits, Ltd., Canal Street Works and Claywood Road, Sheffield.—Detachable rock drill bits for all purposes, tungsten carbide tipped one piece stems and bits; hollow drill rods, shanked and finished for use with bits; bit grinders; hot mills, and rod tapering machines.

The present stage reached in the design and finish of the Group's products is well illustrated in the above-mentioned display. Of particular interest are the metallurgical specimens, as they demonstrate some of the causes of percussive tool breakages.

Speed Reducer for Colliery Washeries, Mixing Machines and Agitators

Varatio-Strateline Gears have introduced a modified version of their Strateline Speed Reducer for vertical flange mounting. Known as type F/VM, this unit is particularly suitable for attachment to mixing machines and agitators of all types although it should also meet a wide demand for such applications as colliery washeries and chemical machinery. In fact, the company has recently received an initial order for 20 of these units from a well known North of England chemical company.

The type F/VM has a reduction of 33 : 1 and incorporates a 7½ h.p. motor running at 960 r.p.m. with a torque output of 13,000 lb.-in. The unit, which embodies the usual Strateline features in that the input and output shafts are coaxial, is designed for horse powers from 2 up to 12 according to the input speed and reduction and is supplied to give any reduction between 20 : 1 and 100 : 1 with a maximum torque of 16,000 lb.-in. for an input of 5 h.p. at 750 r.p.m.

In the near future the company intends to introduce vertical flange mounted units to cover all of its normal range of boxes including double stage units which will enable torques of up to 30,000 lb.-in. to be handled.

Heavy Duty Trucks on the Mesabi Range

The evolution of heavy duty trucks from the 15 ton to the 45 ton truck and the relationship of truck sizes to the size of loading equipment are traced in a paper on "Heavy Duty Haulage Trucks on the Mesabi Range," read at the 1951 American Mining Congress, by R. W. Whitney, Gen'l. Manager of Minnesota Mines, The M. A. Hanna Co., Hibbing, Minn.

The author discusses the types and sizes of truck equipment employed, with particular emphasis on the 30 ton truck, which is now in general use; the factors that go to make up truck costs, such as tyres, road maintenance, speeds and grades on which trucks operate, and preventative maintenance practices now in use, which cover tyres, engines, transmissions, driver training and safety.

It is estimated that, in the years of 1950 and 1951, 66 per cent of the ore and 80 per cent of the stripping material on the Mesabi Range was handled by trucks: this points to the fact that trucking is, in most cases, the most economical way of handling material.

METALS, MINERALS AND ALLOYS

The easing of the supply position in some of the more difficult metals is illustrated by the forecast issued just recently by the I.M.C., on the probable allocations for the second half of the year. The Conference expects to be able to dispose of 508,000 metric tons of zinc next quarter, or about 20,000 tons more than in the current quarter. Moreover, the Conference felt justified in suggesting that an improvement in the supply position could lead to the cancellation of provisional allocations for the second half of the year. The production of tungsten is, according to the I.M.C., 80 per cent higher than in 1951, and the output of molybdenum is up by 20 per cent. But the metals continue to be scarce. Owing to bigger supplies of nickel oxide from Cuba and cast nickel iron from New Caledonia, the Conference will have more nickel available in the second quarter of this year than in the first. On the other hand, the quantity of cobalt available would be little changed and the official description given to copper supplies is "inadequate."

COPPER. American officials are understandably concerned at the rumoured intention of the Chilean Government to impose an export tax of 6c. a lb. on copper and thus, in effect, to break the agreement of last May, under which Chile undertook to supply the States with 80 per cent of her output at 27½c. If this occurred, it is by no means certain that Washington could successfully resist the increase, with the motor industry and other users apparently fully prepared to pay higher prices for comparatively small increased deliveries.

Tasmanian copper production promises to be greatly expanded when plans now made have been put into effect. The Mount Lyell Company is proposing to buy large quantities of heavy equipment and to open big areas for prospecting. In addition to the output of copper being stepped up, large quantities of sulphur will be made as a by-product.

The coal supplies to the Rhodesian copper belt have been seriously threatened with a complete stoppage by the danger to the bridge across the Kafue River. The copper belt companies suspended operations at Christmas because of lack of fuel and a rationing scheme has been imposed. If the bridge is seriously damaged by flood water, the sole link between Northern and Southern Rhodesia will be broken, and the copper belt companies will be forced to rely on timber. This would result in a further curtailment in output.

LEAD.—U.S. domestic mine production of lead declined last year to 390,428 s.tons compared with 420,827 s.tons in 1950. This 9 per cent decrease brought last year's annual output to the lowest since 1947. In presenting these figures the U.S. Bureau of Mines points out that the fall occurred despite higher prices and the strong demand for lead engendered by the expanding national defence programme, and was accounted for partly by extensive shut downs during a fortnight's strike last August and partly by depletion of ore bodies. During the early weeks of this year, domestic production has been progressing at an accelerated pace and the American Lead Industries Association has estimated that total lead supplies available to the States this year, including imports and scrap, may be as much as 1,300,000 tons compared with N.P.A.'s estimated domestic consumer demand of 1,200,000 tons.

TIN.—No developments have been reported in the talks on tin supplies and prices, between the U.S. and delegates from Indonesia and from Belgium. Meanwhile, the Bolivians announced that negotiations would commence at the latter part of this week. The Bolivian ambassador to Washington, Mr. R. M. Vargas, declined to make any statement regarding price, but hinted that some statement might be made when the actual negotiations started.

The Perak Mines Department shows that the fears that lower prices and terrorism would reduce the output of the Chinese miners are not unjustified. Out of the 414 Chinese mines in existence, 130 were not on a profit-earning basis. A higher price and the restoration of tranquility to the country would not have an immediate effect, for the Chinese have suffered from losses of personnel and damage to machinery. Neither of these factors can be mitigated at short notice.

Imports of tin-ore into Malaya during February amounted to 620 tons, against 567 tons during January. Thailand sent 443 tons (473) and Burma was again second with 97 tons (94).

When the tin refinery at Volta Redonda has been completed in, it is hoped, the near future, Brazil will be independent of imports of tin metal. Indeed, she should be able to satisfy her own requirements of 1,800 tons per annum and to export 700 tons.

ZINC.—Although unfilled orders for slab zinc in the U.S. rose for the third successive month, the total of 70,442 tons at the end of February was still below the level of 76,446 tons a year earlier. If last year's experience is repeated the figure for end-March will be higher still. Production of slab zinc from the smelters, according to the American Zinc Institute, in February, was 77,296 tons. This shows a decline on the January output of 83,205 tons, but shipments of zinc were only slightly lower at 77,448 tons, against 78,403. Stocks at the end of February declined a little from 26,703 tons to 26,551 tons, but they were substantially bigger than the 11,117 tons held in stock at the end of February last year.

A. S. & R. is to expand its production of slab zinc by 9,250 tons per annum by constructing concentrating facilities in the State of Washington.

ALUMINIUM.—When the present programme of expanding the U.S. aluminium industry to a capacity of 1,500,000 tons per annum is completed, all foreseeable needs should be met. There is, therefore, no necessity—and industry and Government are at one on this question—to undertake any further expansion programmes. Whether industry and government will see eye to eye on the need for signing a seven-year contract to purchase 300,000 tons of aluminium from Canada is open to doubt.

The production of U.S. bauxite was 42 per cent more in 1951 than in the previous year. The Bureau of Mines estimates provisionally that output was 1,864,076 tons, against 1,334,527 tons. Once again, almost the whole of the U.S. output came from Arkansas. Imports of bauxite jumped by 13 per cent to 2,847,285 tons; purchases from Surinam and Indonesia increased but supplies from British Guiana contracted.

CADMIUM.—According to the British Bureau of Non-Ferrous Metals, the monthly consumption of cadmium in the U.K. averaged 62.60 l.tons during 1951, as compared with 46.19 l.tons in 1950. The greatest increase in consumption was by plating anodes: the monthly average in 1951 for this type of consumption was 27.85 l.tons, against 14.38 in 1950. The use of cadmium in solder rose from 1.76 l.tons per month in 1950 to 3.64 l.tons in 1951.

MAGNESITE.—Larger quantities of most grades of magnesite were produced in Austria during 1951 than in the previous year. Crude magnesite output at 664,188 tons was 22 per cent higher than in 1950. Sintered magnesite was 16 per cent larger at 195,056 tons, and magnesite bricks 17 per cent more at 131,388 tons. The production of caustic calcined magnesite moved against the general trend, being 2 per cent lower at 87,420 tons.

MAGNESIUM.—The largest companies in the British magnesium trade have formed an advisory committee. Apart from encouraging the expansion in the production and application of magnesium and its alloys, the committee will act as an official liaison between the industry and the Government. It will also foster discussions between the firms comprising its membership.

QUICKSILVER.—Turkey has resumed exports after an interval of some years and is reported to have made a recent delivery of 400 kilos to Austria.

TITANIUM.—The Terrebonne Titanium Co. is reported to be awaiting the Spring thaw to commence operations on what are described as its almost unlimited titanium iron ore deposits, only some 55 miles from Montreal. Samples taken from the surface to depths of 250 ft. and 450 ft. have averaged 17.1 per cent titanium oxide and 22.4 per cent iron. The company plans to concentrate the ore on the spot and is spending about $3,000,000 on the plant.

TUNGSTEN.—U.S. production in 1951 is reported to have been 6,167 s.tons (60 per cent WO_3) compared with 4,244 tons in 1950 and 3,043 in 1949.

GOLD.—With the rest of the world's large gold producers able to take a share of the world's business in sales of gold at premium prices, the American producers are feeling disgruntled. The President of Homestake Gold Mining has demanded the abolition of the restrictions on the sale of domestically mined gold. If the U.S. Treasury were to accede to this request, the day of a higher dollar price for gold would be appreciably nearer.

Union Corporation has now published its estimate of world production in 1951, which is put at 25,700,000 f.oz., against 26,400,000 in 1950. The decrease of 7000,000 oz. is largely accounted for by South African production which is 150,000 oz. down at 11,517,000 oz. by Canada which is 110,000 oz. down at 4,330,000 oz. and by the U.S.A. which is 375,000 oz. down at 2,00,000 oz. The Union Corporation's estimate of Russian production remains unchanged at a purely nominal figure of 2,000,000 oz.

SILVER.—Mexican output in 1951 is estimated at 44,249,127 oz., as compared with 49,140,000 oz. in 1950. Output in 1943 was as high as 71,200,000 oz. The President of the Mexican Chamber of Mines suggests that exploration in Mexico is lagging because of heavy taxation; but he thinks the Government is likely to take fiscal measures to help the industry.

The London Metal Market

(From Our Metal Exchange Correspondent)

Prices for tin on the London Metal Exchange during the week have been steady with fluctuations confined within narrow limits. A feature has been a heavy drop in the stocks of metal in official warehouses of over 1,000 tons on the week, resulting in the reappearance of a small backwardation. It would appear that the 1,000 tons have been exported to New York, and it is assumed that this movement may have some connection with the U.K.-U.S.A. tin deal, and the urgent need of the U.S. to receive early deliveries of metal.

Consumer demand here and on the Continent has only been of a spasmodic nature.

In the East the market has been very steady and normal offerings have been readily absorbed.

It was reported from Washington that negotiations would re-open with the Indonesian and Belgian interests on Tuesday, and with the Bolivians probably on Thursday, with a view to reaching agreement on the price to be paid by the U.S. for the purchase of tin ore from those sources.

In other metals the tendency towards the disappearance of premiums in the free market continues.

On Thursday the official close on the tin market was: Settlement price £977 10s., Cash Buyers £977 10s. Sellers £979; Three months' Buyers £977 10s., Sellers £979. In the afternoon the market was steady. Turnover for the day was 115 tons. Approximate turnover for the week was 555 tons.

The Eastern price on Thursday morning was equivalent to £1,002 17s. 6d. per ton, c.i.f. Europe. Part of the rise in this quotation can be attributed to the increased calculation for finance.

Iron and Steel

The steady expansion of steel production in Western Europe and also in the U.S.A. is beginning to exercise visible effects upon world markets. Supply has by no means overtaken the demand, but the lengthening of the period for the completion of the re-armament programme has eased the strain and it is noticeable that Belgian steel export prices have recently been reduced by relatively small amounts.

The performance of the British steel industry in February was less satisfactory, an annual rate of 16,281,000 tons being achieved. This figure, however, is still considerably below the comparable result in February, 1951, and the continued scarcity of scrap, coke and pig iron discourages hopes of further expansion.

Recognizing that the contraction in the supply of scrap is likely to be permanent, steel makers have been concentrating upon an increase in pig iron production to take the place of scrap. Unfortunately, after a continuous rise in blast furnace outputs for four successive months, there was a slight decline in February which the British Iron & Steel Federation attribute entirely to the lack of coke. It was stated recently that coke deliveries to the blast furnaces had fallen short of their allocations and consequently outputs have been curtailed.

Not only the steel works but also the foundries are adversely affected. Producers of iron castings have devoured almost all their stocks of pig iron and of scrap and are almost wholly dependent on current deliveries for the continuance of operations.

Arrivals of steel semis from the Continent are on a slightly heavier scale and prompt distribution is appreciated. But there is still not enough material to enable the sheet and re-rolling mills to get back into full production heavy though the demand is for sheets, light sections, small bars, etc.

The steel allocations for the second quarter of the year which have now been issued, show only slight variations from those in hand for the current period. Here and there slight adjustments have been made, but the authorities are not expecting much steel from U.S. until the second half of the year, when it is expected that substantial increases will be possible. In the meantime the fixed policy of the Ministry is "to ensure that the companies engaged in the export trade shall have sufficient steel to maintain, and if possible to expand their exports."

MARCH 13 PRICES

COPPER

Electrolytic	£227 o o d/d

TIN

(See our London Metal Exchange report for Thursday's prices)

LEAD

Soft foreign, duty paid	£170 o o d/d
Soft empire, including secondary lead	£170 o o d/d
English lead	£171 10 o d/d

ZINC

G.O.B. spelter, foreign, duty paid	£190 o o d/d
G.O.B. spelter, domestic	£190 o o d/d
Electrolytic and refined zinc	£194 o o d/d

ANTIMONY

English (99%) delivered, 10 cwt. and over	£340 per ton
Crude (70%)	£275 per ton
Ore (60% basis)	40s./42s. 6d. nom. per unit, c.i.f.

NICKEL

99.5% (home trade)	£454 per ton

OTHER METALS

Aluminium, £148 per ton.	Palladium, £8 10s. oz.
Bismuth, 28s. lb.	Platinum (scrap), £33.
Cadmium, 18s. 9d. lb.	Platinum, £27/33 5s. nom.
Chromium, 6s. 3d. lb.	Rhodium, £45 oz.
Cobalt, 20s. lb.	Ruthenium, £30 oz.
Gold, 248s. f.oz.	Quicksilver, £73 10s./£74 ex-warehouse.
Iridium, £65 oz. nom.	
Magnesium, 2s. 10½d. lb.	Selenium, 25s. nom. per lb.
Osmiridium, £35 oz. nom.	Silver (bar), 77d. f.oz. spot and forward.
Osmium, £70 oz. nom.	
	Tellurium, 19s. lb.

ORES, ALLOYS, ETC.

Bismuth	50% 16s. lb. c.i.f. 40% 14s. 9d. lb. c.i.f.
Chrome Ore—	
Rhodesian Metallurgical (lumpy)	£13 per ton c.i.f.
,, ,, (concentrates)	£13 per ton c.i.f.
,, ,, Refractory	£12 12s. per ton c.i.f.
Baluchistan Metallurgical	£14 16s. per ton c.i.f.
Magnesite, ground calcined	£26 - £27 d/d
Magnesite, Raw	£10 - £11 d/d
Molybdenite (85% basis)	103s. 1½d. per unit c.i.f.
Wolfram (65%), U.K.	485s. nom. c.i.f.
Tungsten Metal Powder (for steel manufacture)	35s. nom. per lb. (home)
Ferro-tungsten	33s. nom. per lb. (home)
Carbide, 4-cwt. lots	£30 3s. 9d. d/d per ton
Ferro-manganese, home	£43 15s. 2d. per ton
Brass Wire	2s. 7½d. per lb. basis.
Brass Tubes, solid drawn	2s. 1d. per lb. basis.

THE MINING MARKETS

(By Our Stock Exchange Correspondent)

The Budget was of course the salient point of interest during the week. Before Tuesday market conditions became very slack, and by Monday afternoon members were reduced to complete inactivity.

It is not proposed to discuss here all the details of the Budget, most of which are sufficiently well known. From the market point of view, its significance lies in the new line of action being taken which instead of increasing depression with higher taxes, is trying to encourage higher individual earnings and output. This, the Chancellor emphasised, is only a start. The aims of the Budget were to meet the rapidly rising defence expenditure and to remove the heavy deficit in the overseas balance of payments. At recent rates of drainage, less than one year's reserves remain.

The two major factors affecting the Stock Exchange are the alteration in the Bank rate from 2½ per cent to 4 per cent and the Excess Profits Levy—in that order. The first burst in the city like a bombshell. Many informed people had not expected a higher rate; virtually nobody anticipated such a large increase. The immediate effect was a fall of two points on Wednesday in gilt-edged stocks, and, at the time of writing, there is no sign of this trend being checked. The object of the move is to revive overseas confidence in sterling and to curtail internal borrowing credits.

The imposition of an Excess Profits Levy is a questionable piece of legislation but most people will accept it as politically and financially necessary for the time being. Unfortunately, it encourages waste and inefficiency, and handicaps go-ahead companies. Of particular importance to mining interests is the hint that some concession will be given to mining companies domiciled in this country and operating overseas. It will be necessary to await the Finance Act before details are known. As regards gold mines, it is relevant to remember that the basic years 1947, 1948 and 1949 were mainly pre-devaluation; this may operate against companies unfavourably since profits were then at a low level.

The Budget stimulated demand for copper shares although this did not reach sizeable proportions due to prevailing uncertainty. Coppers had been rather a better market immediately prior to the Budget on the possibility of a higher American price for the metal. The foundation for this rumour is that Chile may impose an export price on copper which, it is thought, will increase the world price since other producers would hardly sell at a lower level. Rio Tinto rose sharply following Paris reports that the Spanish Government were preparing a scheme to purchase the company's properties in Spain. The board later denied this and the shares finished below best. "Chartered" improved following hopes of a higher distribution this year.

Kaffirs, mainly unaffected by the U.K. budget, were idle but steady. This followed good pre-budget gains by Randfontein and West Rand Consols. It is clear that many investors hope for considerable contributions from sales of uranium during the next few years.

Rumours are again current concerning favourable taxation changes in the Union budget. There have recently been tales of a drop in gold in the free markets of the world and at one time last week these became widespread in London. In actual practice the premium price has not fallen by any great amount and although lower, is still expected to provide a useful supplement to mine earnings. As mentioned in this column some months ago, however, investors in gold shares should continue to watch developments carefully.

O.F.S. issues were slack and mainly easier. It seems probable that both Welkom and Freddies will have to find fresh capital during 1952 and shares are hardly likely to be buoyant until this operation is out of the way.

Among base metals, Lake George improved on the better interim dividend. Central Provinces Manganese were also a firmer market. The final dividend is due next month. Associated Manganese rose in sympathy.

Tin shares responded to the firmer price of the metal. Dollar issues, where changed, were mostly the turn higher. Prior to the Budget, the dollar premium improved against sterling.

	Price Mar. 12	+ or − on week
FINANCE		
African & European	2⅜	−¼
Anglo American Corpn.	7⅛	−⅛
Anglo-French	21/3	+7½d
Anglo Transvaal Consol.	37/6	.....
Camp Bird	12/3	−1½d
Central Mining (£1 shrs.)	40/-	−7½d
Consolidated Goldfields	51/10½	−7½d
Consol. Mines Selection	31/10½	−1/10½
East Rand Consols	3/7½	.....
General Mining	4⅜	−⅛
H.E. Prop.	34/4½	−7½d
Henderson's Transvaal	13/3	−3d
Johnnies	3⅜	.....
Rand Mines	5⅛	−⅛
Rand Selection	43/9	.....
Union Corporation	9	.....
Vereeniging Estates	4⅜	.....
Writs	35/-	.....
West Wits	49/6	+1½d
RAND GOLD		
Blyvoors	43/4½	+4½d
Brakpan	19/9	+3d
City Deep	42/6	−1/3
Consol. Main Reef	43/9	.....
Crown	3⅛	⅛
Daggas	3⅜	+⅛
Dominion Reefs	2/6	−1½d
Doornfontein	27/10½	+1½d
Durban Deep	3⅜	.....
E. Daggas	22/6	−7½d
E. Geduld ... (4/- units)	47/6	−7½d
E. Rand Props.	3⅜	−⅛
Geduld	6⅜	⅛
Grootvlei	36/-	.....
Libanon	16/1½	−7½d
Luipaards Vlei	20/6	.....
Marievale	23/-	.....
Modderfontein B	5/1½	−1½d
Modderfontein East	31/3	.....
New Kleinfontein	33/9	.....
New Pioneer	17/1½	−1½d
Randfontein	23/-	+9d
Robinson Deep	14/3	+6d
Rose Deep	34/4½	.....
Simmer & Jack	7/-	.....
Springs	10/-	+6d
Sub Nigel	2⅜	+⅛
Van Dyk	14/-	−6d
Venterspost	25/3	−4½d
Vlakfontein	18/6	+3d
Vogelstruisbult	28/-	.....
West Driefontein	6⅜	+⅛
W. Rand Consolidated	51/10½	+1/10½
Western Reefs	44/4½	+7½d
O.F.S.		
Alpha F.S.A.	7/6	.....
Blinkpoort	20/-	−7½d
Central Mining F.S.	4/1½	+1½d
Freddies	8/10½	−1½d
Freddies N.	7/10½	−1½d
Freddies S.	8/10½	−1½d
F.S. Geduld	3⅛	−⅛
Geoffries	21/6	−6d
Harmony	19/6	.....
Lydenburg Estates	11/-	−3d
Middle Wits	19/3	−6d
Ofsits	44/4½	−1/3
President Brand	17/6	.....
President Steyn	15/9	−3d
St. Helena	18/4½xr	+1½d
U.F.S.C. & G.	8/3	+6d
Virginia Deb.	73	.....
Virginia Ord.	10/6	−6d
Welkom	33/9	−7½d
Western Holdings (New)	3⅜	.....
WEST AFRICAN GOLD		
Amalgamated Banket	1/10½	.....
Ariston	6/8xd	−1½d
Ashanti	24/6	−3d
Bibiani	8/1½	−1½d
Bremang	2/10½	−1½d
G.C. Main Reef	3/4½	+1½d
G.C. Selection Trust	7/4½	−1½d
Konongo	3/1½	+1½d
Kwahu	4/6	.....
London & African Mng.	1/9	.....
Lyndhurst Deep	1/4½	.....
Marlu	1/10½	.....
Nanwa	5d	.....
Taquah & Abosso	5/3	.....
AUSTRALIAN GOLD		
Boulder Perseverance	2/9	−1½d
Gold Mines of Kalgoorlie	11/-xd	+3d
Great Boulder Prop.	6/3	.....
Great Western Consol.	5/9	.....
Lake View and Star	18/6	−1½d
Mount Morgan	17/6	.....
North Kalgurli	15/9	−3d
Paringa	6d	.....
Sons of Gwalia	10/-	−9d
South Kalgurli	8/9	−3d
Western Mining	7/9	+3d
Wiluna	5/9	.....
MISCELLANEOUS GOLD		
Cam and Motor	40/-	.....
Champion Reef	8/-	+3d
Falcon Mines	9/3	.....
Globe & Phoenix	24/6	−6d
MISCELLANEOUS GOLD (contd)		
G.F. Rhodesian	7/4½	−4½d
London & Rhodesian	5/3	−3d
Motapa	2/1½	+1½d
Mysore	4/9	+1½d
New Guinea	1/6	.....
Nundydroog	5/9	.....
Ooregum	3/-	+1½d
Oroville	12/3	.....
St. John d'El Rey	32/6	.....
Zams	36/10½	−2/4½
DIAMONDS		
Anglo American Inv.	4⅜	.....
Cons.	33/9	.....
Cons. Diam. of S.W.A.	4½	.....
De Beers Defd. Bearer	73/3	−1/6
De Beers Pfd. Bearer	14½	−⅜
COPPER		
Chartered	62/6	+3/-
Indian Copper	3/9	−4½d
Messina	4½xr	+⅛
Nchanga	7⅛	+⅛
Rhod. Anglo-American	62/6	+2/9
Rhodesian Selection	19/-	+9d
Rhokana	22½	+⅛
Rio Tinto	22½	+⅛
Roan Antelope	13/10½	+10½d
Selection Trust	45/-	+1/9
Tanks	60/9	+1/3
Tharsis Sulphur Br.	50/-	.....
TIN (Eastern)		
Anglo-Burma	3/-	+3d
Ayer Hitam	28/-	.....
Bangrin	9/10½	+1½d
Gopeng	13/6	+3d
Hongkong	9/3	.....
Ipoh	25/-	+7½d
Kamunting	11/3	+1½d
Kepong Dredging	8/-	−9d
Kinta Tin Mines	16/6	.....
Kramat Pulai	4/10½	−1½d
Malayan Dredging	22/3	.....
Pahang	16/3	+6d
Pengkalen	10/3	−3d
Petaling	15/3	−1½d
Rambutan	15/-	.....
Siamese Tin	23/-	+7½d
Southern Kinta	15/-xd	−6d
S. Malayan	24/9	+3d
S. Tronoh	19/4½	−4½d
Sungei Kinta	19/4½	−7½d
Tekka Taiping	9/3	.....
Tronoh	26/3	+6d
TIN (Nigerian and Miscellaneous)		
Amalgamated Tin	16/1½	−1½d
Beralt Tin	22/9	+9d
Bisichi	4/-	.....
British Tin Inv.	16/7½	−3d
Ex-Lands Nigeria	5/9	.....
Geevor Tin	15/-	−1½d
Gold & Base Metal	4/6	+1½d
Jantar Nigeria	6/7½	+1½d
Jos Tin Area	11/-	−3d
Kaduna Prospectors	4/3	+3d
Kaduna Syndicate	5/3	−3d
London Tin	5/9	.....
Ribon Valley	1/1½	.....
United Tin	2/7½	←1½d
SILVER, LEAD, ZINC		
Broken Hill South	48/3	+1½d
Burma Corporation	3/-	−3d
Consol. Zinc	28/9	+3d
Lake George	29/3	+9d
Mount Isa	37/6	.....
New Broken Hill	26/3	.....
North Broken Hill	63/9	.....
Rhodesian Broken Hill	18/7½	+1½d
San Francisco Mines	32/3	+6d
Trepca	3/6	+1½d
MISCELLANEOUS BASE METALS & COAL		
Amal. Collieries of S.A.	48/1½	+7½d
Associated Manganese	46/3	+2/6
Chinese Engineering	4/-	+3d
C.P. Manganese	50/6	+2/-
Natal Navigation	3⅜	+⅛
Wankie	17/9	+9d
Witbank Colliery	2⅛	+⅛
CANADIAN MINES		
Dome	$33	.....
Hudson Bay Mining	$116	.....
International Nickel	$84½	+$½
Mining Corpn. of Canada	£6	+⅛
Noranda	$144	+$1
Quemont	£8	.....
OIL		
Anglo-Iranian	5⅛	−⅛
Apex	47/6	−7½d
Attock	25/-	+7½d
Burmah	60/7½	−1/10½
Canadian Eagle Bearer	30/6	−3d
Mexican Eagle	23/6	−3d
Shell	4½	−⅛
Trinidad Leasehold	32/-	+6d
T.P.D.	30/6	+9d
Ultramar	32/6	−3d

COMPANY NEWS AND VIEWS

Consolidated Mines Selection Maintains Dividend

In 1950 Anglo American Corporation of South Africa adopted the practice of declaring interim dividends and this affected the receipts of Consolidated Mines Selection Company for the year 1950. For in addition to receiving a final dividend of 6s. per unit of stock from Anglo American Corporation, in which it maintains a large holding, in respect of 1949, it also received an interim dividend of 2s. per unit in respect of 1950. This can fairly be described as revenue of a non-recurring nature and materially assisted in raising the investment income for 1950 to £284,855.

Year to Dec. 31	*Investment Income*	*Other* Income*	*Total Expenses*	*Tax*	*Net Profit*	*To Reserve*
	£	£	£	£	£	£
1950	284,855	38,286	17,346	122,996	182,799	50,000
1951	249,024	85,109	52,213	131,083	150,837	25,000

*Profits on share realizations, underwriting commissions, etc.

On the other hand, investment income for the calendar year 1951 contained no special items. It was made up of income from newly acquired investments and from increased dividends from certain of its holdings and in particular from Rhodesian Anglo American.

Despite the year being unfavourable for share dealings, revenue from this source, together with receipts from underwriting commissions, etc., improved by some £47,000. However, much of this benefit was lost owing to the allocation of £32,612 to adjust the book values of certain investments which shared in the general recession in share values occurring in the latter part of the year and this was responsible for the higher expenditure under "total expenses" shown in the above table.

After providing for this expenditure and for taxation net profit was some £8,000 lower than previously. The dividend of 25 per cent comprising 1s. 6d. per unit of stock plus a bonus of 1s. was maintained; £25,000 was transferred to general reserve against the sum of £50,000 and the carry forward at the end of 1951 amounted to £34,293 against £36,581 brought in.

While the general pattern of the company's investments remained the same as before, a substantial holding of Rand Selection Corporation was acquired during the year and also an investment was made in the 4½ per cent registered unsecured notes of African and European Investment. Another developing mine, Loraine Gold, was added to the list of the company's Orange Free State holdings, while its former holding of Wit Extensions and of Free State Geduld were presumably realized during the year as they do not appear in the list of the company's principal holdings as at the end of 1951.

Petaling Tin Achieves Record Results

The operating results which made possible the record profit achieved by the Malayan incorporated Petaling Tin Company during the year ended October 31, 1951, and reported in our issue of February 15, are shown in the following table.

		Per Cubic Yard			*Per Ton*	
Year to Oct. 31	*Treated Cu. Yds.* (000)	*Yield (Lb.)*	*Cost (Pence)*	*Output (Tons)*	*Cost* £	*Price Recd.* £
1951	8,447.9	0.51	10.7	2,129	177	646*
1950	7,976.4	0.52	7.1	1,874	126	406

* Less tribute.

The volume of ground treated during the year under review was substantially greater than in the preceding 12 months, while the yield per cub. yd. remained virtually the same. This fact coupled with a rise of £240 per ton in the price received for tin ore easily offset the rise in production costs of approximately £56.

These impressive results had favourable repercussions on the net profit which, after providing for all expenses including £259,000 (£81,667) for taxation, amounted to £645,880 compared with £376,535 in the previous year. Four interim dividends of 30 per cent each making, with the final dividend of 30 per cent, 150 per cent for the year were paid on the issued capital of £513,333 (which was increased to its present amount in December, 1950 when the company paid a capital bonus of 100 per cent absorbing £256,667 from general reserve). General reserve received £116,667 (£175,000) and the carry forward at the fiscal year end was £109,222 against £121,514 brought in.

The company's application for the conversion to mining title of 538 acres of the property of Seaport (Selangor) Rubber Estate has now been approved. But the hoped for transfer of No. 5 dredge to work this area has been held up owing to the non-delivery of certain materials required for the transfer; meanwhile this dredge continues to operate in the Puchong area.

The outlook for the current year is favourable, although No. 6 dredge is working through somewhat lower ground than in the year under review.

The annual meeting was held in Ipoh, Malaya, on February 28 last when a first quarterly interim dividend of 25 per cent (30 per cent) was declared in respect of the current year. Mr. J. T. Chappel is chairman.

Anglo-French Maintains Dividend on Increased Capital

The full report and accounts of The Anglo-French Exploration Co. for the calendar year 1951 reveals that the company's investment portfolio remained substantially the same as in the preceding year although holdings in Loraine Gold and in Malayan Tin Dredging were acquired. At the end of 1951 the book cost of the company's investments stood in the balance sheet at £962,018 (£929,583). Of this amount £922,242 (£883,047) represented quoted securities at or below cost, having a market valuation of £1,196,682 (£1,038,998) and the remainder, £39,776 (£46,784) represented the book cost of its unquoted investments, the directors' valuation being the same.

During the calendar year 1951, investment income increased by £21,064 to £71,976 but profit from the sales of farms and land in Southern Rhodesia declined £2,504 to £3,067 as did profits from share dealings which were lower by £4,337 at £32,699 giving a total revenue of £107,742 compared with £93,519 previously. After charging all administrative expenses, providing £44,569 (£38,328) for taxation and writing £11,203 (£9,260) off investments, net profit amounted to £33,833 against £31,196.

In October last the company increased its authorized capital from £750,000 to £1,000,000 by the creation of 250,000 shares of £1 each, of which 50,000 £1 shares were issued to stockholders, making a total issued capital of £800,000. Expenses in connection with this issue amounted to £2,168. The dividend distribution on the increased capital was 7½ per cent, the same as has been distributed for the last seven years and absorbed £31,500. The carry forward amounted to £33,668 against £30,938 brought in.

The annual meeting will be held in London on April 2. Mr. F. R. Cottell is chairman.

Oroville Dredging Co.—A Correction.—In commenting on the report and accounts of Oroville Dredging in our issue of February 29, it was inadvertently stated that the company had a 99.9 per cent interest in Pato Consolidated Gold Dredging. This percentage should, of course, have related to Oroville's holding in its subsidiary company, Pato Mines (Colombia) Ltd.

Readers will no doubt also have noticed that owing to the dropping of a decimal point the dividend from Bulolo Gold Dredging received in Oroville's year to September 30, 1950, appeared as $100 instead of $1.00.

Company Shorts

Corderoy's High Lead Disclosures at Wheal Ellen Confirmed.—Corderoy Mines have announced that in a drive of 600 ft. north on the 195 ft. level in the Wheal Ellen Lead Mine, five payable stretches totalling 480 ft. in length averaged 13.4 per cent lead over an estimated stope width of 38 in. Over the same length and stope width the average value in zinc was 1.5 per cent. In the south stope face between the 125 ft. and 195 ft. levels, the stope face, which was 80 ft. in length, was sampled in six sections averaging 23.2 per cent lead and 7.6 per cent zinc over a stope width of 48 in.

As the results received from Australia were much higher than expected, arrangements were made for duplicate portions of 10 of the high grade samples to be sent to George T. Holloway & Co. for a check assay. The result has been to confirm the high average values yielded and the directors of Corderoy have announced the average values of the 10 London assays was 26.87 compared with the average Australian figure of 27.91.

Thistle-Etna Gold Liquidation.—In view of the exhaustion of the company's mine, Thistle-Etna Gold Mines have decided to convene an extraordinary general meeting on April 8 in London to consider a special resolution to place the company in voluntary liquidation.

Akim's Small Trading Profit.—The trading profit of Akim Concessions for the year ended September 30, was £3,518 compared with a loss of £13,264 in the preceding year. After providing for all expenses and £3,253 (£3,014) for depreciation, a loss of £567 was incurred. Against this there was a surplus of £253 on realization of equipment, leaving a debit balance of £322 (£13,092) to be carried forward.

The directors state that illicit diamond mining operations on the company's concessions is becoming a major problem which, unless checked, may have a serious effect on the company's future operations.

The annual meeting will be held in London on March 19. Mr. T. A. Ryder is chairman.

GRADUATE, 26, with two years' City training in ore and metal exports, junior member Institute of Metals, experienced linguist, seeks progressive work at home or abroad. Box 518, "The Mining Journal," 15, George St., Mansion House, London, E.C.4.

REQUIRED IMMEDIATELY FOR GOLD MINES IN THE WESTERN REGION OF NIGERIA, WEST AFRICA.

One Mining Engineer with good practical underground mining experience to take charge of Gold Property in the Western Region of Nigeria. First tour of 18 months followed by three months' leave on full pay, with subsequent tours of 15 months. Passages, Furnished Quarters and medical attention provided free. Write stating age, experience and salary required to Box 517, The Mining Journal, 15, George Street, Mansion House, London, E.C.4.

SITUATIONS VACANT ADVERTISED ABOVE.—*The Notification of Vacancies Order, 1952, must be complied with where applicable.*

The World's Greatest Bookshop

FOYLES

"FOR BOOKS"

Large dept. for Technical Books

New, secondhand and rare Books on every subject. Stock of over 3 million volumes

Subscriptions taken for British, American & Continental magazines

We BUY Books, Coins, Stamps

119-125 CHARING CROSS RD., LONDON, W.C.2

Gerrard 5660 (16 lines) ✱ *Open 9-6 including Saturdays*

ANGLO-BURMA TIN CO. LTD.

The Twenty-fifth Annual General Meeting of the Anglo-Burma Tin Co., Ltd., was held at Salisbury House, London Wall, E.C.2, on Wednesday last.

Mr. John Miller (Chairman) who presided, in the course of his speech said: Current Assets again show an improvement at £163,968 compared with £149,018, despite the repayment of the £20,000 4 per cent Debenture Stock on 30th November, 1950, and mainly reflect the profits which we were able to earn during the first nine months of our financial year. As a result, after deducting current liabilities and future tax reserve, it will be seen that the balance of net cash assets is £91,608.

In the Profit and Loss Account "Expenditure in Burma and London" £105,818, is about £25,000 more than the previous year. This increase is due to the rising cost of labour and all other items in Burma, to which I referred last year, and also to the lack of adequate supervision, owing to the enforced absence of our senior staff from the mine during the greater part of the year. Depreciation is about £2,000 lower at £14,333.

Although production fell by 89 tons of tin concentrates the value increased from £134,579 to £167,761. This was due to the much higher average price of Metallic Tin at which our production was sold, viz., approximately £1,087 per ton compared with £603 in the previous year.

The year's net profit, after providing £27,334 for taxation, amounted to £14,535. As, upon final agreement of our United Kingdom income tax liabilities for past years up to 31st May, 1950, our taxation reserves proved to be in excess of requirements, we have transferred from Taxation Reserve to the credit of Appropriation Account the sum of £15,000. With the £437 balance of profit brought forward from last year there remains a sum of £29,972 to be dealt with.

Although a reasonable profit was earned for the year under review, this profit actually accrued during the first nine months and, since March, 1951, there has been a radical change for the worse in our earning capacity, due to the conditions in the Tavoy district.

In view of the substantial indebtedness which the Company still has to the 6 per cent Debenture holders, and the uncertain future outlook, it remains essential to conserve our cash resources. The sum of £25,000 has accordingly been transferred from Appropriation Account to General Reserve, leaving £4,972 to be carried forward.

CONDITIONS IN BURMA.—At the beginning of our financial year under review, viz., 1st June, 1950, plant operations at Heinda were in progress under the supervision of senior Asiatic members of our staff, the European staff, as you are aware, having been evicted from the mine by armed raiders in the previous January. In November, 1950, there appeared to be some improvement in conditions and permission was granted for our European Staff to return to the mine. This was the position when I addressed you at the last Annual Meeting. Shareholders have since been advised by circular that it was again necessary to withdraw the European staff to the town of Tavoy in March, 1951, owing to the serious deterioration in the conditions of lawlessness prevailing. They have been unable to return up to the present time.

Thus, the Company's operations for the financial year to 31st May, 1951, were only under the supervision of our European staff for less than four months.

Furthermore, in March, 1951, plant operations were on this occasion stopped by bandits who removed certain parts which, although of small material value, effectively immobilised our electrical plant. These parts have since been replaced but damage has also been occasioned to our sluice box system and it has so far been impossible to resume normal plant operations.

Shortly after the stoppage occurred the labour force was reduced to a minimum and steps were taken to organize tribute operations, in an endeavour to cover essential outgoings. During the current financial year these operations have produced an average of about 6 tons of concentrates a month, the revenue from which approximately covers the reduced cash outgoings in Burma, but is insufficient to meet Debenture interest and London expenses and the heavy cost of our annual insurance premiums.

Every effort is being made to improve these results and to maintain title to our, potentially, very valuable fixed assets in the district. The resumption of profitable operations depends entirely on the return of more settled conditions in the country and the recommencement of normal plant operations. We regret to say that there are, at the moment, no signs of any early improvement in conditions, and, of course, the longer such conditions continue the greater will be the eventual cost of reconditioning plant and buildings.

Meantime, a close watch is being kept on our liquid assets.

FUTURE PROSPECTS.—It is usual for me to make a few remarks regarding future prospects. The Company has a valuable tin bearing property, and the experience and the technical staff to justify our confidence that, with a reasonable price for the metal and the return of stable conditions in Burma, satisfactory profits could be earned for shareholders and substantial contributions made to the revenues of the Burma Government.

The Report and Accounts were adopted.

PETALING TIN, LTD.

A MOST SUCCESSFUL YEAR

The Twenty-Sixth Annual General Meeting of Petaling Tin, Ltd., was held on February 29th, at Ipoh, Perak, Malaya.

Mr. J. T. Chappel, C.B.E., M.I.M.M., Chairman of the Company, presided and in moving the adoption of the Report of the Directors and the Statement of Accounts for the year ended October 31st, 1951, said the Company had the most successful year in its history and earned a nett profit of $5,536,112 (£645,880). Interim dividends of 120 per cent were declared and a final of 30 per cent is proposed; an appropriation of $1,000,000 (£116,667) has been made to General Reserve and a slightly lower balance of $936,190 (£109,222) is left to be carried forward.

Since the close of the year, the Company's War Damage and Losses Claim has been finally assessed at $2,911,905 (£339,722), including $262,117 (£30,580) in respect of the rehabilitation of No. 4 Dredge, which will not be undertaken pending the acquisition of another property, and a first dividend of 60 per cent on the balance has been paid by the War Damage Commission which reduces our Rehabilitation Expenditure in Suspense to $1,898,258 (£221,463).

You will note from the General Managers' report that work on regrouping the labour force within a fenced-in and defended area, including the provision of accommodation for some labour not previously housed on the property, was almost completed by the end of the year. The main residential area (upon which nearly $250,000 (£29,167) had up till then been spent) now constitutes a fair-sized village with a flourishing Co-operative Store, among other amenities, and provides housing for a population of some 1,400.

TIN PRICE

A year ago the tin price was artificially inflated by scare buying; subsequently it was artificially depressed by the action of the Reconstruction Finance Corporation in denying to United States consumers the tin they required. The recent moderate recovery in the price is no doubt due to the announcement of the agreement between the Governments of the United States and Great Britain under which the latter will supply during the current year 20,000 tons of tin to the U.S.A. and receive 1,000,000 tons of steel. While Malayan Producers would prefer to see the resumption of normal purchasing by the United States consumers in the open market in Singapore, it is a step in the right direction that Straits tin will now be made available again in the United States, and we welcome the statement that both the United States and the United Kingdom Governments favour a return to normal trading methods as soon as possible.

The Government of the Federation has given an assurance that no international commitments affecting Malayan producers will be entered into without prior consultation with the Industry. The tin-for-steel agreement gives no cause for concern on this account as we are told that the tin will be obtained by the British Government through normal channels and the freedom of the Singapore Market is not affected, but this can only be a temporary expedient. Meanwhile the Reconstruction Finance Corporation continues to be the sole buyer of tin for all United States requirements, and drastic restrictions on the end-uses of tin in that country are maintained.

The Members of the American Goodwill Mission, which was invited to Malaya last November by the Government at the suggestion of the Industry, were given every opportunity to satisfy themselves that Malayan producers were not rigging the market in any way and that the charges of cartel activities to this end were absurd. It is hoped that, after consideration of the Mission's report, the United States Government will recognize the true position and in due course permit the resumption of normal buying by American consumers in the Singapore Market, where Malayan tin is daily on offer. The relationship between producers and consumers can never be satisfactory, so long as the purchasing of tin by the world's largest consuming nation is the monopoly of a single Government-controlled organization, and commercial consumers are not permitted to obtain their normal requirements.

TRIBUTE TO STAFF

The state of emergency continues unabated, and once again I pay tribute to the steadfast manner in which the Staff and Labour Force have continued to carry out their duties under trying conditions. Following the Secretary of State for the Colonies' recent visit to Malaya early action on specific points has been promised, of which the most urgent requiring immediate attention is the efficient organization of the Special Constabulary and Home Guards under adequate leadership, without which these essential organizations can never operate efficiently. "Stream-lining" of the Federal and State Administrations so that action can be promptly initiated and pressure maintained is also essential, but, here too, the whole-hearted co-operation of the public is equally vital if results are to be obtained. The new High Commissioner has the right to demand such co-operation from all communities and interests in Malaya in dealing with the many complex problems in the present Malayan situation.

The Chairman concluded by announcing the declaration of a first quarterly interim dividend of 25 per cent.

The Report and Accounts were adopted.

OROVILLE DREDGING CO. LTD.

SIR JOSEPH BALL'S STATEMENT

The Fortieth Annual General Meeting of the Oroville Dredging Co. Ltd., was held on March 12 in London.

In the absence of **Sir Joseph Ball, K.B.E.,** the chairman, **Mr. Robert Annan,** a director, presided.

The following is a summary of the Chairman's statement, which was circulated with the report and accounts:—

RESULTS FOR THE YEAR

Due mainly to an increase of £23,000 in the provision for taxation, the consolidated net profit for the year to September 30, 1951, at £42,745 was approximately £25,000 less than the previous year. The increase in taxation was attributable partly to the increase in the rates of income tax and profits tax, but more particularly to the fact that the previous year's accounts received a non-recurring credit of over £15,000 in respect of allowances for losses on shares written off many years ago and of income tax losses brought forward. The dividend is maintained at 1s. 3d. per share and a small amount is added to the carry-forward.

The balance-sheet as a whole presents a strong position with liquid funds at a relatively high level. While present restrictions last, however, opportunities for using available cash resources are necessarily extremely limited and, as in so many other fields, we can only hope that conditions will improve.

MINING INTERESTS

Pato Consolidated and Asnazu, operating in Colombia, South America, were again adversely affected by a number of Governmental decrees, the effect of which will mean a further increase in operating costs. Moreover, the steadily increasing cost of labour and supplies as compared with the price of gold may result in the recasting of gravel reserves from time to time and the elimination of such blocks of gravel as cannot be worked at a profit. Political conditions in Columbia were fairly stable throughout the year and relations with labour remain satisfactory.

For the year to December 31, 1951, Pato Consolidated's production valued at $6,130,740 with gold at $35 U.S. showed an increase of $2,363,217 over the production for the previous year. In the same period, Asnazu's production of $655,375 was $259,070 less than the previous year.

Bulolo Gold Dredging, Ltd., had a satisfactory year, its operating profit for the year ended May 31, 1951, being almost the same as the previous year. It is expected that Dredge No. 5 which capsized in November, 1949, will resume dredging in February, 1952. Of the four dredges still in operation, or a total of five if Dredge No. 5 is included, two will probably be closed down about the middle of 1953 and a third about a year later, leaving the two deep-digging dredges, Nos. 5 and 7, for which there remains an estimated life of about 12 years from May 31, 1951. For the seven months to December 31, four dredges produced $1,614,025 with gold at $35 U.S. per f.oz., which is $336,805 more than for the corresponding period of the previous year when six dredges were in operation.

With regard to our remaining interests, the Board have, in the last two years, invested in the shares of various mining companies operating in South Africa and in Australia, such investments being spread partly over established producing companies and partly over those in the developing stage. While some of our investments have depreciated in value, others have appreciated, but the specific cases of depreciation are more than provided for by the investment reserve.

The possibility that Asnazu may be coming to the end of its workable reserves within the next two or three years must be borne in mind, but we may reasonably expect that, subject to factors outside our control, revenue will be maintained at a satisfactory level in the current financial year.

The report and accounts were adopted.

OMCOL
The Trade Mark of
THE OAKLAND GROUP

SILLIMANITE

KYANITE

OAKLAND METAL CO. LTD.
94 NEW BOND STREET,
LONDON, W. 1

Telephone: GROSVENOR 5241/4
Cables: AMOMET, LONDON

THE CONSOLIDATED MINES SELECTION, CO. LTD.

ABRIDGED REPORT OF THE DIRECTORS FOR THE YEAR ENDED 31st DECEMBER, 1951

CAPITAL

The authorized capital was increased during the year from £900,000 to £1,200,000. The issued capital remains unchanged at £900,000.

ACCOUNTS	1951 £	1950 £
PROFIT—		
Profit after charging all expenses but before providing for taxation was	281,920	305,795
Deduct: Taxation—United Kingdom (and South African)	131,083	122,996
	150,837	182,799
Add: Unappropriated Profits brought forward	36,581	41,032
Making a total available for appropriation of	187,418	223,831
APPROPRIATIONS—		
Deduct: Amount transferred to General Reserve	25,000	50,000
	162,418	173,831
Deduct: (Proposed) Dividend of 1s. 6d. per stock unit and Bonus of 1s. 0d. per stock unit (less Income Tax) and Directors' Additional Remuneration	128,125	137,250
Leaving Unappropriated Profits to be carried forward	£34,293	£36,581

The profit for the year of £281,920 is some £24,000 lower than the previous year's figure but is arrived at after writing-off from the book values of certain investments a net sum of £32,612. In accordance with past practice, quoted investments are shown in the Balance Sheet at cost or market value whichever was the lower. Due to the general recession in share values which took place in the latter part of 1951, a total amount of £51,614 had to be provided to adjust book values to this basis. The book value of one investment had on the other hand to be written-up by £2,750 which was credited to Investments Reserve. The net allocation required of £48,864 was met by utilizing the resultant balance on that reserve of £19,002 and charging against profits the £32,612 referred to above. Stockholders will, however, appreciate that whilst the method of valuing investments makes this charge necessary, it has little bearing on the overall strength of the Company's investment position for at the date of the Balance Sheet quoted securities had a market value of £3,288,525 which was more than double their book value of £1,534,750.

The distribution recommended is the same as for last year, viz.: a dividend of 1s. 6d. per stock unit plus a bonus of 1s. 0d. per stock unit. It is not proposed to maintain a balance on Investments Reserve Account but £25,000 has been allocated to General Reserve, thus slightly reducing the balance of unappropriated profits compared with the figure shown in the Accounts for last year.

The Profit and Loss Account shows income from dividends and interest of £249,024. This represents a substantial increase over the £180,000 your Directors foreshadowed on the basis of normal dividends from investments held at the end of 1950 and provided no new revenue producing shares were acquired meantime. The comparative figure for 1950 was £284,855 but, as mentioned in the Report for that year, this included certain revenue of a non-recurring nature. The present amount contains no special items. It includes income from newly acquired investments and also reflects increased dividends from certain companies, in particular from Rhodesian Anglo American, Ltd. Whilst the dividend income for 1951 can be considered satisfactory, your Board wishes to stress that the Company's revenues from all sources must inevitably fluctuate year by year.

Although the year under review was again unfavourably for share dealing, net profits from share realizations, underwriting commissions, etc., showed an improvement of some £47,000. Income from underwriting continued to be a fruitful source of revenue, and given normal trading conditions the Directors feel that this branch of the Company's activities can be further and profitably developed.

The Fifty-sixth Annual General Meeting of members will be held at The Chartered Insurance Institute, 20, Aldermanbury, London, E.C.2, on the 31st March, 1952, at 12.30 p.m. Copies of the full Report and Accounts may be obtained on application to the Company's office, 11, Old Jewry, London, E.C.2.

THE MERCANTILE BANK OF INDIA

YEAR OF CONTINUED PROGRESS

SIR CHARLES A. INNES ON GRAVE ECONOMIC PROBLEMS

The Fifty-ninth Annual General Meeting of The Mercantile Bank of India, Ltd., will be held on April 1st in London.

The following are extracts from the statement of the chairman **(Sir Charles A. Innes, K.C.S.I., C.I.E.):**

The record of the bank in 1951 was one of continued progress though the rate of expansion slowed down compared with the previous year. Deposits increased by some £5,000,000, and the balance-sheet total is £74,000,000 against £67,000,000 a year ago. Our profit is better than last year, and we are maintaining our dividend at 12 per cent. We have made the usual allocations and have increased the carry forward. I hope you will agree that the results of the year's working are satisfactory.

DETERIORATION IN INTERNATIONAL SITUATION

Last year I referred to the worsening international situation and in 1951 there was a further deterioration especially in the Eastern half of the world. You are aware of recent events in the Middle East, in Malaya and in Korea, and there is little I need add. The plain fact is that a formidable military machine is being built up in China, and it still remains to be seen whether it is intended merely for the defence of China or whether the Peoples' Republic of China has aggressive designs in South East Asia. I am more concerned in this speech with economic conditions. I have no doubt that in the long view the gravest economic problem in the East is that of food. It is the same story in India, Japan, Malaya and Ceylon. All are deficit countries in the matter of food and in all of them population is increasing at an alarming rate.

A more immediate problem is that of inflation. It is still rife everywhere. Another thing that impresses one in one's study of economic conditions is the way in which international trade is complicated, hampered and distorted by regulations and controls.

In spite of all things, however, many of the countries in which we operate enjoyed a year of great if possibly somewhat hectic prosperity and the business of the bank expanded. The general pattern of the year's trade is clear enough. The spectacular rise of prices which followed the outbreak of the Korean war in July, 1950, and which resulted from the general scramble for scarce commodities continued into 1951 and reached its peak in February. At the end of that month rubber was selling at 6s. a pound and tin at £1,422 a ton. It is not surprising that boom conditions supervened in places like Malaya and Hongkong and also for different reasons in Japan, and a good deal of over-indenting took place with untoward results later in the year. Prices broke soon afterwards and for the rest of the year the trend of commodity prices was downwards. This fall of prices is a healthy sign as long as it is not pushed too far and too fast. In this matter, of course, much depends on American policy. One of the outstanding features of the modern world is the way in which American demand conditions most of the world's commodity markets. Moreover the end of the year was marked by the balance of payments crisis which blew up so suddenly in this country. It is a crisis which affects the whole of the sterling area, and all member countries have agreed that it must be surmounted and that as a first step they must combat inflation and live within their means. This country has lead the way by raising the bank rate, by imposing import cuts and by funding operations which have had the effect of reducing the liquidity ratio of the banks and so restricting credit. Further measures are promised in the Budget. It is obvious that the era of cheap money has passed and that we are in for a period of higher money rates and credit restrictions which may slow down trade.

INDIA—As regards industry and commerce, there was some increase of production especially in coal, steel, cement and cloth, and the external trade of the country improved in value. In the last two or three years there has been an increasing tendency for foreign firms of worldwide repute to establish new industries in India. Usually half the capital employed is Indian. These joint enterprises already cover a wide range of manufactures, and the development constitutes a useful addition to India's capital resources and industrial capacity.

PAKISTAN—Progress is being made in the programme for the industrial development of the country.

MALAYA—Immediate prospects for tin seem reasonably good. There is anxiety in Malaya as to the future trend of rubber prices. It would be disastrous if rubber prices were allowed to fall to an uneconomic level and it is to be hoped that measures will be concerted in good time by the American and British Governments to prevent this happening.

NATIONAL BANK OF INDIA

The Annual General Meeting of the National Bank of India, Ltd., will be held on 1st April, in the Bank's premises at 24, Bishopsgate, E.C.2.

The following is an extract from the Statement by the Chairman, **Mr. J. K. Michie,** which has been circulated to shareholders with the report and accounts for the year ended 31st December, 1951:

The accounts for the year 1951, now presented, again show increased figures, the total of the Consolidated Balance Sheet having risen to £147,283,674 from £133,404,121 at 31st December, 1950.

The figures pertaining to the National Bank of India, Ltd. alone show a rise of £15,326,882 over the year, but, contrary to our experience in 1950 and for reasons indicated in my last Statement, there was a relatively small increase in deposits and a considerable increase in advances. Consequently cash balances fell and investments also show a reduction.

After the necessary transfer to the Staff Pension Fund and after making full provisions for taxation, bad and doubtful debts, and other necessary reservations, our net profits are £410,673, an increase of £48,716 over the previous year.

We have opened four new branches and one sub-branch during the year and we shall reopen a branch closed in 1935 at Eldoret in Kenya in the near future and in the same premises. We also have plans to open a branch at Moshi in Tanganyika whenever the necessary arrangements can be completed. Masaka, Uganda, which was a sub-branch to Kampala, operated as a full-time independent branch as from 30th October, 1951. We intend to break new ground by opening at Hargeisa in the Somaliland Protectorate as soon as temporary premises are ready for occupation.

Last year I wrote at a time when the spurious prosperity induced by the 1949 devaluation of most of the currencies of the Sterling area had been exhausted and when the balance of payments gap, now so starkly outlined, was plainly foreseen by bankers if not by Governments.

At the turn of the year large demands were made on us for accommodation to finance imports (largely Government sponsored) and exports awaiting or in the course of shipment or held up at ports due to congestion and as our primary function is that of Exchange bankers our advances at the end of the year perforce reached a much higher level than is usual. The position has since been relieved and the situation is now returning to the normal for the season of the year.

In India, 1951 was another year of difficulty—crops generally and foodgrains in particular being adversely affected by a poor monsoon. I am glad to say the food situation has been considerably relieved by shipments of wheat from the United States of America largely financed by loans. This policy of assistance, I notice, is again likely to be adopted by the United States this year.

I am glad to see that the Government of India has recently halved the export duty on manufactured jute goods for I cannot imagine any tax more likely to act as a painful boomerang than one on goods manufactured in a country which produces only a part of the raw material involved.

In common with many other countries India is short of capital for industrial development, and I am glad to see that following a visit to India by its president, Mr. Eugene Black, the International Bank for Reconstruction and Development is likely to make a considerable loan to India for this purpose.

Economically, Pakistan has enjoyed a very successful year although her import markets are still suffering from a surfeit of supplies bought early in 1951.

The trade and revenue of Ceylon continues to be buoyant although the considerably lower prices for rubber and copra now prevailing will doubtless show up in 1952. The construction work of the Colombo harbour development plan is well begun and is proceeding satisfactorily.

Turning West, our branches in Aden have again had a busy year, and in spite of a temporary set-back in the oil fuelling business of the port caused by the Persian impasse the volume of its trade has been well maintained.

In October last, the currency of the colony was converted from Indian rupees to East African shillings, and as Bankers to the Government our branches, in co-operation with the Treasury, had the task of carrying out this operation. I understand it was accomplished with satisfactory expedition.

Industrially and in commerce and trade what are called the High Commission territories of East Africa—Kenya, Uganda, Tanganyika and Zanzibar—continue to expand, if in different directions and at varying tempos.

In Kenya industrial development steadily continues, if on unspectacular lines, but useful industries such as tile-making and cement manufacture are likely to be increased.

In Uganda, the Owen Falls Hydro-electric Scheme at Jinja proceeds according to plan and will undoubtedly assist greatly in the further development of industries in the Protectorate. Within the next few years the railway system will be extended to the Belgian Congo border at Kilembe where rich ore deposits have been located.

Largely because of the prosperity of the sisal and coffee planting industries Tanganyika can also plan a much needed extension of her road and rail facilities.

Port and rail facilities are the crux of the question of increasing the overseas trade of East Africa and, at the moment, particularly as applying to Kenya and Uganda, they are lagging behind present and potential needs. I do not see how a large development of western Uganda can be possible unless the rail link from Kampala to the coast is enabled to carry much more traffic than it handles at present.

I write in the interval between the recent London Conference of the sterling area countries called to consider the critical position of the balance of payments for the whole area and the issue of certain national budgets in which presumably the general policy agreed upon will be reflected.

As a Bank operating in many of the countries concerned we hope sincerely a concerted policy will be followed and that, in so far as this requires credit restriction, we shall have the full support of the Central Banks concerned.

Now that it has been agreed inflation must be fought it is surely an anomaly that money which is a scarce commodity should be "cheap" while everything else is dear. It is this unbalance that has been the cause of some of our post-war economic ills and which must be rectified on world-wide lines. Banks do not want dearer money for its own sake or for their profit but because money rates must be allowed to reflect market conditions and so play their part in the fight against inflationary tendencies.

1952 is bound to be a year of adjustment and difficulty but we have no reason to expect that it will not be reasonably successful.

THE NATIONAL BANK OF INDIA, LIMITED

Registered in London under the Companies Act of 1862 on the 23rd March, 1866.

ESTABLISHED IN CALCUTTA, 29th SEPTEMBER, 1863.

Subscribed Capital	**£4,562,500**
Paid-up Capital	**£2,281,250**
Reserve Funds	**£3,675,000**
Number of Shareholders	**3,037**

HEAD OFFICE - 26, BISHOPSGATE, LONDON, E.C.2.

BALANCE SHEET, 31st DECEMBER 1951

	£	£	1950 £
CAPITAL—Authorised and Subscribed—			
182,500 Shares of £25 each ...	4,562,500		4,562,500
Paid-up £12 10s. per Share		2,281,250	2,281,250
RESERVE FUNDS — Including Share Premium Account £1,128,750 (1950—£1,128,750) ...		3,675,000	3,600,000
PROFIT AND LOSS ACCOUNT:—			
Profit unappropriated		275,161	281,113
		6,231,411	6,162,363
CURRENT LIABILITIES, PROVISIONS AND OTHER ACCOUNTS:—			
Current and other Accounts, including provision for Doubtful Debts, Taxation on profits to date and reserves for contingencies	89,803,997		88,704,147
Fixed and Short Deposits	20,156,131		12,872,240
Amounts due to Subsidiary Companies	1,267,707		172,532
Loans Payable	4,000,000		—
Bills Payable	1,779,884		1,507,354
Acceptances for Customers	1,962,702		451,751
Second Interim Dividend less Income Tax for the year ended 31st December, 1951	95,812		100,375
		119,066,233	
		£125,297,644	£109,970,762

	£	£	1950 £
CURRENT ASSETS:—			
Cash on Hand, at Call and Short Notice, and at Bankers		17,370,212	21,886,789
Investments at under Market Value:—			
British Government and other Securities quoted on the London Stock Exchange	11,779,649		14,772,310
Indian, Pakistan and Ceylon Government and other Rupee securities quoted on Overseas Stock Exchanges...	8,811,300		9,210,530
East African Government Securities amounting to £1,110,650 and other unquoted Investments ...	1,132,521		2,588,696
		21,723,470	
		16,362,679	15,452,205
Bills of Exchange			
Advances, Loans Receivable and other sums due to the Bank		65,476,404	43,350,889
Amount due by Subsidiary Company		—	83,997
Customers for Acceptances per Contra		1,962,702	451,751
Total Current Assets		122,895,467	107,797,167
SUBSIDIARY COMPANIES:—			
Shares at cost less amounts written off		1,450,000	1,450,000
FIXED ASSETS:—			
Bank Premises, Property and Furniture at cost, less amounts written off		952,177	723,595
		£125,297,644	£109,970,762

NOTES:—

(1) Securities to the nominal value of £612,500 (1950–£500,000) have been lodged as security for Government accounts and for guarantees issued to Indian Government Departments.

(2) Bills receivable rediscounted £14,680,169 (1950–£6,462,626) of which up to 4th March, 1952, £9,852,070 have run off.

(3) Forward contracts outstanding for the purchase and sale of Bills and Telegraphic Transfers £113,834,771 (1950–£94,316,147).

(4) Liabilities have been incurred in respect of building contracts for new premises amounting to approximately £516,689 (1950–£158,446).

(5) There are contingent liabilities in respect of confirmed credits outstanding amounting to £28,586,847 (1950–£23,322,872).

(6) There are contingent liabilities in respect of guarantees entered into in the ordinary course of business.

(7) Overseas Current Assets and Liabilities have been converted at the rate of 1s. 6d. per Indian Rupee, 2s. 2d. per Pakistan Rupee and £1 per 20 East African Shillings, and other currencies at the rates of exchange ruling on 31st December, 1951.

T. T. K. ALLAN, *General Manager.*
D. A. DEELEY, *Accountant.*

J. K. MICHIE
A. N. STUART
J. R. H. PINCKNEY
Directors.

REPORT OF THE AUDITORS TO THE MEMBERS.

We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit. In our opinion proper books of account have been kept by the Bank so far as appears from our examination of those books and proper Returns adequate for the purposes of our audit have been received from Branches not visited by us. We have examined the above Balance Sheet which is in agreement with the books of account and Returns. In our opinion and to the best of our information and according to the explanations given to us the said Balance Sheet gives the information required by the Companies Act, 1948, in the manner thereby authorised for Banking Companies and on such basis the Balance Sheet gives a true and fair view of the state of the Bank's affairs as at 31st December, 1951.

We have also examined the annexed Consolidated Balance Sheet and Consolidated Profit and Loss Account of the Bank and its Subsidiaries dealt with thereby with the audited accounts of those Companies. In our opinion such Consolidated Balance Sheet and Consolidated Profit and Loss Account have been properly prepared from such accounts in accordance with the provisions of the Companies Act, 1948, in the manner thereby authorised for Banking Companies and, on this basis, give a true and fair view of the state of affairs of the Bank and its Subsidiaries dealt with thereby so far as concerns members of the National Bank of India, Limited.

London, 5th March, 1952.

COOPER BROTHERS & CO.,
W. A. BROWNE & CO.,
Chartered Accountants.
Auditors.

THE CHARTERED BANK OF INDIA, AUSTRALIA AND CHINA

The Ninety-eighth Ordinary General Meeting of the Chartered Bank of India, Australia and China will be held in London on April 2nd.

The following is an extract from the statement by the Chairman, **Mr. V. A. Grantham,** circulated with the report and accounts for the year 1951:

Almost a hundred years have passed since Her Majesty's ancestor, Queen Victoria, granted to this Bank a Royal Charter, and I hope that, in 1953, it will be possible to mark in some way the attainment by the Bank of its first centenary. Few people who are not concerned from day to day with British commercial and financial operations in Asia are able to comprehend the significance of the political and social changes which have taken place during a decade which may well prove to be one of the great watersheds of world history. Never have there been in so short a time such extensive transfers of sovereignty. A revolution on so gigantic a scale might have been expected to extinguish institutions more firmly established than the branch organization of a commercial bank controlled and directed from Western Europe, but it is remarkable that, notwithstanding the almost cataclysmic changes which have occurred in the social, political and economic structures of nearly all the Asian lands engaged in international commerce, The Chartered Bank has preserved its system of branches almost intact.

An important factor in this signal achievement has been the readiness with which our branch managers have adapted their way of life to unfamiliar social conventions and new forms of government and jurisdiction, and adjusted their professional technique to changed commercial customs.

Again this year the Accounts indicate a further expansion of the Bank's business, and the total of the Balance Sheet at £213,632,879 is the largest we have ever shown, as it exceeds the figure for last year by £20,030,239. The Net Profits for the year are £697,097, an increase of £64,290 over those of last year, which themselves reflected an even greater increase over those for 1949. Throughout the last three years there has been a general deterioration in working conditions in almost every country in which the Bank operates, accompanied by higher and ever higher working costs, and only the fact that the Bank has handled a progressively increasing volume of business in each of these three years has enabled us to show an increased nett profit return on each occasion. Last year I said that we should be prepared from then onwards for diminishing nett returns and, although we are, this year, fortunately able to report not diminished, but greater, nett returns, it would be fool-hardy, in the face of the recession we are now experiencing, although so far this has been of moderate dimensions, not to be prepared for some reduction in future nett profits. While we may still hope to increase our share of such business as is available, our turnover must, in the end, be related to the volume of trade in the countries which the banks serve.

We paid an interim dividend in September last of 7 per cent, less Income Tax, absorbing £110,250, and it is proposed that, out of the balance now available, a final Dividend of 7 per cent, less Income Tax, should be paid, costing £110,250, making the total distribution for 1951, 14 per cent, as was also the case for 1950.

After making a comprehensive review of the Bank's operations in the East the Chairman made the following observations concerning the difficulties which Great Britain is experiencing in achieving an external balance of payments:

Much has been written recently on the subject of the United Kingdom's inability to pay for imports with the proceeds of exports, and because of the special difficulty experienced in meeting the cost of imports from the dollar countries, there are many who advocate avoidance of dollar imports and concentration upon imports from Commonwealth and other Sterling area countries and from such European countries as will take adequate supplies of goods from the United Kingdom in return. While this might be a practical solution of Great Britain's payment difficulties, were all the Sterling area countries able and willing to disregard the effect which such a policy might have upon their Sterling balance positions, and allow their Sterling balances to rise without limit whenever the United Kingdom's imports exceeded exports, it must be evident that any assumption to this effect would be no more tenable than one which assumed that the United Kingdom might continue to import from the dollar countries, trusting to the United States, Canada and other dollar-based countries, to allow the Sterling area, as personified by Great Britain, unlimited credit.

No doubt there is much to be said in favour of Great Britain, for, when this country was predominant in world trade, it exported capital and capital goods abroad in large measure, building up, *inter alia*, railways in the United States, Canada and the Argentine, and was content to wait for repayment until those countries prospered. Moreover, Great Britain's present plight can, to some extent, be attributed to the results of war and the liquidation of the country's foreign holdings of securities in the common cause of the Allies. Having thus received at the hands of Great Britain the seeds of prosperity, these same lands, have proceeded to eliminate Great Britain as a competitor in their home markets, if not by ability to produce cheaper and better goods, then by hedging themselves around with protective duties and regulations.

None of these countries, can be expected to adopt policies similar to those which enabled Great Britain to remain for an era the great creditor nation of the world. In fact, the world of to-day is in a different stage of development and there do not appear to be many long-term fields where inthe dollar countries could come to the rescue of the Sterling area countries by investing capital in the way Great Britain did a century ago. If this be so in relation to assistance from the dollar to the Sterling area countries, and the United States has been more than generous in extending dollar aid to relieve distress, it is equally so in relation to assistance from Great Britain to the less developed countries of the Sterling area.

Therefore, it seems essential that the United Kingdom should become able to stand upon its own feet in relation to both Dollar-based countries and Sterling-based countries, whether of the British Commonwealth of Nations or otherwise.

The Chartered Bank, if not the greatest single financial institution based on London, dealing with the United Kingdom's foreign trade, is certainly one of the first half-dozen so engaged, and every year the bank makes a very substantial contribution to the United Kingdoms' balance of payments without using up any labour or imported raw materials, and with only the minimum consumption of resources within the country. We may therefore claim, that the bank is a valuable asset of this country, and is justified in giving expression to its views upon this all-important subject of balancing the country's trade.

The Bank also pays a heavy contribution in tax on all its profits, both abroad and in this country, and the final amount taken by this country, after providing for all foreign payments, is far from inconsiderable. The proportion of profits paid to the Stockholders, who take all the risks, and provide all the reserves necessary to the business, represents a very small share indeed as compared with the taxation the Bank pays. So the inflation caused by the payment of dividends by this Bank scarcely exists. And if taxation were less, the bulk of the saving to the Bank would not be paid out in increased dividends, but would be used in the furtherance of our business abroad. As the position stands to-day, what the Bank pays in taxation here on profits earned overseas, is spent in this country, and to this extent we are debarred from helping to increase the foreign income which this country so urgently needs.

Here we have a concrete instance of taxation which is both damaging to the country's foreign payments position and, at the same time, contributes to inflation within the country. There can be no justification for expenditure in this country, whatever it may be for, if it leads to the ruination of other nations in the Sterling area, through the collapse of Sterling as a World currency.

The plain fact of the matter is that Great Britain must live within its income. That Great Britain is not doing so at present is patent in its inability to balance the foreign payments position. In other words Great Britain is taking more out of the common pool than it is putting into it. This position can only be rectified by putting more into the pool and/or by taking less out of it, which means working harder and/or lowering the standard of living.

If this implies, in justice to our friends throughout the world, that the more affluent of the people of the United Kingdom, whether workers or others, must eschew television sets, electrical appliances, films, tobacco, and even some proportion of the food subsidies and benefits of the welfare state, then the people concerned must face up to the position or emigrate, for it is quite certain that sooner or later our friends abroad will refuse to foot the bill. As was appropriately quoted the other day in a special article in *The Times* on "The Beveridge Principles," "To each according to his needs, at the best standard the community can afford."

The outlook is therefore sufficiently bleak; but the unequivocal declarations of the present Chancellor of the Exchequer have given hope that the Government will leave no stone unturned to correct the disequilibrium of Great Britain's foreign payments position, and I have therefore felt justified in putting my views on this painful subject before our Stockholders, which hitherto I have refrained from doing. Given the ability to increase production of coal and steel, and accelerate the building of ships, and the production of all kinds of motor vehicles and machinery, the welfare state without modification would be well within the grasp of the people, and the balance of payments position would take care of itself. No doubt all this is clearly in the mind of the Chancellor of the Exchequer, but until the people of the country can be inspired to greater efforts (which to be effective must not carry with them equivalent monetary gains) the measures open to the Government to balance our foreign payments position are in the main of a restrictive nature. The balance of payments once achieved, however, must be regarded as the initial step to greater effort and greater freedom. Only so will the country regain its stature and justify the use of Sterling as the world's most used and most useful currency.

The Chartered Bank of India, Australia and China

(INCORPORATED BY ROYAL CHARTER, 1853)

CAPITAL, STOCK Authorised and Issued - - - - - - £3,000,000
RESERVE FUND - - - - - - - - - - £4,000,000

Head Office: 38, BISHOPSGATE, E.C.2.
West End Branch: 28, CHARLES II STREET, HAYMARKET, S.W.1.
Manchester Branch: 52/54, MOSLEY STREET, MANCHESTER, 2.
Liverpool Branch: 27, DERBY HOUSE, EXCHANGE BUILDINGS, LIVERPOOL, 2.

BALANCE SHEET, 31st DECEMBER, 1951

	£	£	1950 £
CAPITAL—			
Stock authorised and issued ... (There is under the Charter a reserve liability of the Stockholders equal to the amount of Stock issued).	3,000,000		3,000,000
RESERVE FUND	4,000,000		4,000,000
PROFIT AND LOSS ACCOUNT	397,433		365,836
		7,397,433	7,365,836
CURRENT AND OTHER ACCOUNTS, including Reserves for Contingencies, Taxation on profits to date and Exchange Adjustments	169,145,002		150,204,804
FIXED DEPOSITS	18,605,700		16,038,240
NOTES IN CIRCULATION against Security per contra	2,549,629		3,000,527
BILLS PAYABLE	2,530,592		1,863,904
LOANS PAYABLE	1,400,833		1,234,902
DEPOSITS BY NOMINEE SUBSIDIARIES ...	381		381
DEPOSIT BY TRUSTEE SUBSIDIARY ...	8,993		4,544
PROPOSED FINAL DIVIDEND, less Income Tax	110,250		132,000
ACCEPTANCES, including undertakings to accept, on account of Customers	11,884,066		13,757,502
		206,235,446	186,236,804
		£213,632,879	£193,602,640

NOTES:—
(1) There are contingent liabilities on Bills rediscounted £19,553,080 (1950, £14,129,629) (of which £13,421,153 has run off at 3rd March, 1952) and commitments in respect of Confirmed Credits, Guarantees and Forward Exchange Contracts.
(2) Contracts for outstanding capital expenditure on premises amount to approximately £77,000 (1950, £151,000).
(3) Assets and Liabilities in foreign currencies have been converted into sterling at approximately the rates of exchange ruling on 31st December, 1951.
(4) Under Part III of the Eighth Schedule to the Companies Act, 1948, the Bank is exempted from showing the aggregate amount of its reserves and the movements therein.

	£	£	1950 £
CURRENT ASSETS—			
CASH IN HAND, AT CALL AND AT BANKERS		33,804,187	31,430,977
GOVERNMENT AND OTHER SECURITIES at Market Value—			
Quoted on London Stock Exchange	49,827,629		44,964,185
Quoted on Overseas Stock Exchanges...	9,059,192		7,779,959
Dominion Government and other Securities at Local quotations	3,215,127		3,122,550
		62,101,948	55,866,694
HONGKONG GOVERNMENT CERTIFICATES OF INDEBTEDNESS for surrendered coin lodged against Note Issue	1,179,278		1,179,278
BRITISH GOVERNMENT SECURITIES at Market Value (Quoted on London Stock Exchange) lodged against Note Issue	1,750,000		1,767,500
		2,929,278	2,946,778
BILLS OF EXCHANGE, including United Kingdom and Foreign Treasury Bills		12,887,101	14,244,427
ADVANCES TO CUSTOMERS AND OTHER ACCOUNTS		86,779,492	67,157,831
BALANCE OF REMITTANCES, DRAFTS, ETC., IN TRANSIT between Head Office, Branches and Agencies ...		547,852	5,569,513
LIABILITY OF CUSTOMERS FOR ACCEPTANCES, including undertakings to accept, per contra ...		11,884,066	13,757,502
		210,933,924	190,973,722
FIXED ASSETS—			
SUBSIDIARIES—Shareholdings at cost—			
Allahabad Bank Limited—37,648 Ordinary Shares of Rs. 100 each of which 14,665 are fully paid and 22,983 are paid up to the extent of Rs. 50 per share...	747,705		747,705
The Chartered Bank (Malaya) Trustee Limited—			
30,000 Shares of Straits $10 each, $5 paid	17,500		17,500
Nominee Companies	381		381
The net assets of the Nominee Companies amount to £381, represented by deposits with the Bank, per contra.			
	765,586		765,586
BANK PREMISES AND FURNITURE, at cost less amounts written off ...	1,912,744		1,842,707
TRADE INVESTMENT, representing Property (at cost)	20,625		20,625
		2,698,955	2,628,918
		£213,632,879	£193,602,640

W. R. COCKBURN, *Chief General Manager.*
H. F. MORFORD, *Deputy Chief General Manager.*
W. H. CARRICK, *Chief Accountant.*

V. A. GRANTHAM, *Chairman.*
J. L. MILNE, *Deputy Chairman.*
J. TAIT, *Director.*

REPORT OF THE AUDITORS TO THE STOCKHOLDERS

We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit. In our opinion proper books of accounts have been kept by the bank so far as appears from our examination of those books, and proper returns adequate for the purposes of our audit have been received from the branches, which have not been visited by us. We have examined the annexed balance sheet and profit and loss account of The Chartered Bank of India, Australia and China, which are in agreement with the books of account and returns as aforesaid. In our opinion and to the best of our information and according to the explanations given to us the said accounts give the information required by the Companies Act, 1948, in the manner so required for banking companies, and, on the basis indicated in Note (4) on the balance sheet, such balance sheet gives a true and fair view of the state of the bank's affairs as at 31st December, 1951, and the profit and loss account gives a true and fair view of the profit for the year ended on that date. We have also examined the annexed accounts of the subsidiaries, Allahabad Bank Limited and The Chartered Bank (Malaya) Trustee Limited, which have not been audited by us. Subject thereto in our opinion such accounts have been properly prepared in accordance with the provisions of the Companies Act, 1948, so as, in conjunction with the accounts of the bank as audited by us (which include particulars regarding Nominee Companies), to give on the basis mentioned above a true and fair view of the state of affairs as at 31st December, 1951, and of the profit for the year ended on that date of the bank and its subsidiaries so far as concerns stockholders of The Chartered Bank of India, Australia and China.

DELOITTE, PLENDER, GRIFFITHS & CO.
W. A. BROWNE & CO.
Auditors, Chartered Accountants.

LONDON, 5th March, 1952.

Profit and Loss Account for the year ended 31st December, 1951

	£	£	1950 £
ALLOCATIONS—			
Amount written off Bank Premises	200,000		200,000
Officers' Pension Fund	125,000		125,000
Widows' and Orphans' Fund	20,000		20,000
Contingencies Account	100,000		100,000
		445,000	445,000
DIVIDENDS PAID AND PROPOSED, less income tax—			
Interim 7% paid 28th September, 1951 ...	110,250		99,000
Final 7% proposed	110,250		132,000
14%		220,500	231,000
BALANCE PROPOSED TO BE CARRIED FORWARD ...		397,433	365,836
		£1,062,933	£1,041,836

	£	£	1950 £
BALANCE BROUGHT FORWARD FROM 31ST DECEMBER, 1950		365,836	409,029
PROFIT, after providing for Taxation and after making allocations to Contingency Accounts, out of which Accounts full provision has been made for diminution in value of assets		697,097	632,807
		£1,062,933	£1,041,836

NOTES:—
(1) The aggregate emoluments received by the Directors for their services amounted to £19,280 (1950, £16,250).
(2) The nominee subsidiaries do not trade and their accounts show neither profit nor loss.

Metal and Mineral Trades

THE BRITISH METAL CORPORATION LIMITED

HEAD OFFICE
PRINCES HOUSE, 93 GRESHAM STREET, LONDON, E.C.2
Tel. Monarch 8055

AND AT

17 SUMMER ROW, BIRMINGHAM
Tel. Central 6441

47 WIND STREET, SWANSEA
Tel. Swansea 3166

OVERSEAS ASSOCIATES

THE BRITISH METAL CORPORATION (AUSTRALIA) PTY., LIMITED SYDNEY, PERTH AND MELBOURNE

THE BRITISH METAL CORPORATION (CANADA) LIMITED MONTREAL

DREW, BROWN LIMITED MONTREAL AND TORONTO

THE BRITISH METAL CORPORATION (INDIA) LIMITED CALCUTTA AND BOMBAY

THE BRITISH METAL CORPORATION (PAKISTAN) LIMITED KARACHI

THE BRITISH METAL CORPORATION (SOUTH AFRICA) (PROPRIETARY) LTD. JOHANNESBURG

C. TENNANT, SONS AND CO., OF NEW YORK, NEW YORK

WOLFRAM ORE
TIN ORE

FELIX KRAMARSKY CORPORATION
39 BROADWAY
NEW YORK 6, N. Y.
Cable Address: Orewolfram

International Smelters and Buyers of

SCRAP METALS AND RESIDUES

• SLAG • SKIMMINGS DROSSES SWEEPINGS • ASHES • BY-PRODUCTS

INTERNATIONAL SMELTERS LTD
Christchurch Road, London, S.W.19
Phone : Mitcham 2181 Wire : Intasmelta, Phone, London.

EASTERN SMELTING CO. LTD.

CAPITAL—AUTHORISED £500,000: £435,000 ISSUED

Head Office: ST. SWITHIN'S HOUSE, 11/12 ST. SWITHIN'S LANE, LONDON, E.C.4
Telephone: MANsion House 2164/7 *Telegrams:* TIMAMASA, PHONE LONDON

TIN SMELTERS

BRANCHES THROUGHOUT THE MALAY STATES

Sole Selling Agents : VIVIAN, YOUNGER & BOND, LIMITED, 8 BASINGHALL STREET, LONDON, E.C.2
Telephone : MONarch 7221/7

Contractors for Ores · Concentrates · Residues
containing
ZINC · COPPER · LEAD · ANTIMONY · WOLFRAM

LEOPOLD LAZARUS LTD

CREECHURCH HOUSE · LONDON · E.C.3
Telephone: AVENUE 5341 Cables: ORMINLAZ, LONDON
Offices at: SYDNEY · JOHANNESBURG · CALCUTTA

THE COMMERCIAL METAL COMPANY LTD

66 GRESHAM STREET, LONDON, E.C.2

ORES, METALS, ALLOYS, STEEL AND CHEMICALS

Telephone: MONARCH 0211 (8 lines) **(Members of the London Metal Exchange)** *Cables:* COMETALCO LONDON

EVERITT & Co. LTD.

40 CHAPEL STREET LIVERPOOL

Teleg. Address: Persistent, Liverpool Phone: 2995 Central

SPECIALITY:

MANGANESE PEROXIDE ORES

We are buyers of:

WOLFRAM, SCHEELITE, VANADIUM, MOLYBDENITE, ILMENITE, RUTILE, ZIRCONIUM and TANTALITE ORES

Suppliers of:

FERRO-ALLOYS & METALS, NON-FERROUS ALLOYS

GEORGE T. HOLLOWAY Co. LTD.

Metallurgists & Assayers

ORE TESTING, WORKS AND METALLURGICAL RESEARCH LABORATORIES

Atlas Road, Victoria Road, Acton, LONDON, N.W.10

Telephone: ELGAR 5202 *Grams and Cables:* NEOLITHIC LONDON

MINING & CHEMICAL PRODUCTS, LTD.

MANFIELD HOUSE, 376, STRAND, W.C.2

Telephone: Temple Bar 6511/3 Works: ALPERTON, WEMBLEY, MIDDLESEX
Telegrams: "MINCHEPRO, LONDON"

Buyers of Silver Ores and Concentrates

Smelters and Refiners of

BISMUTH

ORES, RESIDUES & METAL

Manufacturers of:

FUSIBLE ALLOYS, SOLDER, WHITE METALS, ANODES OF TIN, CADMIUM and ZINC IN ALL SHAPES

Importers and Distributors of:

ARSENIC · BISMUTH · CADMIUM CAESIUM SALTS · INDIUM · SELENIUM TELLURIUM · THALLIUM

ROKKER & STANTON LTD.

DRAYTON HOUSE, GORDON STREET LONDON, W.C.1

Metal Stockists & Shippers

for

BRASS, COPPER, ALUMINIUM AND NICKEL SILVER

in

Sheets, Rods, Tubes, Strip, Wire, etc.

Associated Companies in Holland and Belgium; also Regd. in South Africa and Rhodesia.

Tel: EUS 4751/2 Cables: BENTLY 2nd; A.B.C.6
Grams: ROKKER, WESTCENT, LONDON

THE STRAITS TRADING COMPANY LIMITED

Head Office:

P.O. Box 700, OCEAN BUILDING, SINGAPORE

Works:

SINGAPORE & PENANG

"The Straits Trading Co., Ltd." Brand of Straits Tin

THE BRITISH TIN SMELTING COMPANY, LIMITED

Works: LITHERLAND, LIVERPOOL

Smelters of Non-ferrous Residues and Scrap

London Agents:

W. E. MOULSDALE & CO., LTD.

2 Chantrey House, Eccleston Street, London, S.W.1

Cables: Wemoulanco, London *Telephone:* SLOane 7288/9

Telephone: AMHERST 2211 (six lines)

E. AUSTIN & SONS

(London) LIMITED

ATLAS WHARF

Hackney Wick, London, E.9

Are Buyers of all scrap

NON - FERROUS METALS, GUNMETAL, ALUMINIUM, COPPER, BRASS, LEAD, Etc.

Manufacturers of

INGOT BRASS, GUNMETAL & COPPER ALLOYS, INGOT LEAD, TYPE METAL, ZINC, Etc.

ROURA & FORGAS, LTD. *Telephone Nos:* **HOLBORN 0517-9**

Sole Sterling Area Suppliers of

ITALIAN QUICKSILVER

HANOVER HOUSE,
73-78, HIGH HOLBORN, LONDON, W.C.1

LEONARD COHEN LTD.

GOLD, SILVER AND THE PLATINUM METALS
ORES, CONCENTRATES AND RESIDUES
METAL HARDENERS
NON-FERROUS METAL INGOTS

London Office: **1 HAY HILL, W.1** *Telephone:* **GROSVENOR 6284**
Works: **PORTH, GLAM** *Telephone:* **PORTH 280**

ZINC SHAVINGS
GRANULATED & POWDERED
NON-FERROUS METALS

"Lead Wool" for Pipe-jointing.
Metallic Packing for Pumps, etc.

THE LEAD WOOL CO., LTD.
SNODLAND KENT
Telephone: Snodland 84216 & 7 Telegrams: "Strength, Phone, Snodland"

E. M. JACOB & CO. LTD.

International Importers of all :
NON-FERROUS ORES, MINERALS, RESIDUES, MATTES, SLAGS, BY-PRODUCTS, SCRAP METALS

★

79 Bishopsgate, London, E.C.2
Phone : LONDON WALL 9341/3 Grams: "JACOMETA, LONDON"

ILMENITE
10,000 TONS AVAILABLE NOW

TiO_2	59.60%	Fe_2O_3	27.00%
FeO	11.52%	Al_2O_3	0.44%
SiO_2	0.50%	CaO	0.05%
MgO	0.17%	MnO	0.31%

Bids to: **SILTA, Corso Matteotti, 9, Milano,** *Cables:* **Siltam**

DEERING PRODUCTS LTD.
8 GREAT SMITH STREET, LONDON, S.W.1

ORES - MINERALS - REFRACTORY RAW MATERIALS
Telephone: ABBEY 2681/2 Cables: PRODEERING, LONDON

MAXWORTH METAL PRODUCTS LTD.
NORTON CANES STAFFORDSHIRE
Telephone: HEATH HAYES 329

Buyers of
TUNGSTEN RESIDUES

Such as **H.S.S., HAMMERSCALE, GRINDINGS**
For Recovery
In form of **TUNGSTEN - BEARING METAL**

PLATT METALS LTD.
METAL MANUFACTURERS and MERCHANTS

Buyers of
BRASS ROD SWARF AND SCRAP, and all descriptions of NON-FERROUS SCRAP METALS, BORINGS AND RESIDUES

Sellers of
BILLETS AND INGOTS TO ANY REQUIRED COMPOSITION, GRADED NON-FERROUS SCRAP METALS

METALEX WORKS, Great Cambridge Road, ENFIELD, Mddx.
Telephone: ENField 3425 (5 lines) Telegrams: Walton, Enfield

MAYBANK METALS LTD.

This Company backed with the vast experience gained in a 100 YEARS of progressive trading, will expedite all orders . ..

THE BUYING OF MIXED OR SORTED NON-FERROUS SCRAP METALS and Supplying of Finely Graded Non-Ferrous Scrap to Your Requirements.

MAYBANK METALS LTD.
STAR WORKS, SPURGEON STREET, SOUTHWARK
LONDON, S.E.1 Telephone: HOP 2432/3
HOP 4212/3/4

ENTORES, LIMITED
KINGS HOUSE. 36 & 37 KING STREET,
LONDON, E.C.2

NON-FERROUS METALS
ORES · RESIDUES

Telegrams: Entores, Phone, London
Telephone: MONarch 3415

ELTON LEVY & CO. LTD.

METALS ★ ★ ORES
★ TAILINGS
★ DUMPS
★ RESIDUES
★ SCRAP

1-4 ST. ERMIN'S (WEST SIDE), CAXTON STREET, LONDON, S.W.1
Phone: WHitehall 9621/2/3 Grams: Eppenleco, Sowest, London

Telephones: HOP 1071 (2 lines) CANONBURY 5956 Cables & Telegrams: LUNZMETAL, LONDON
S. B. LUNZER & CO., LTD.
Members of The National Association of Non-Ferrous Scrap Metal Merchants
IMPORTERS NON-FERROUS METALS : SEMIS EXPORTERS
INGOTS : SCRAP AND RESIDUES
Office:—WESTMINSTER BANK CHAMBERS, LONDON BRIDGE LONDON S.E.1.
Warehouse:—16b, ST. PAUL'S PLACE, CANONBURY N.1.

CONSULTING METALLURGISTS
A.I.D & A.R.B Approved for
MECHANICAL TESTING
METALLURGICAL ANALYSIS
ACLOQUE & Co.
26 Bloomsbury Way, London, W.C.1 HOLborn 4487

H. BARNETT LTD.
VICTOR ROAD, LONDON, N.7.
IMPORT : EXPORT
Phone: ARCHWAY 5461 (5 lines) Established 1865
WE SPECIALISE IN ALL NON-FERROUS SCRAP AND INGOT METALS

SMELTERS and REFINERS
CONCENTRATES, SLAGS
MINING BY-PRODUCTS
PRODUCERS OF SILVER SOLDERS, FLUXES NON FERROUS INGOTS
SHEFFIELD SMELTING Co. Ltd.
BIRMINGHAM SHEFFIELD LONDON
ROYDS MILL STREET · SHEFFIELD, 4

LEAD

H. J. ENTHOVEN & SONS, LTD.
Smelters and Refiners
● ANTIMONIAL LEAD for the Battery Trade
● LEAD ALLOYS for the Cable Trade
● PRINTING METALS ● SOLDERS
City Office: 89 Upper Thames St., London, E.C.4.
Telephone: Mansion House 4533. Telegrams: Enthoven, Phone, London
Works: Rotherhithe, Croydon & Derbyshire

"Tropag"
ASBEST- & ERZIMPORT OSCAR H. RITTER K. G.
Hamburg · — · Ballindamm 7
Importers of
ASBESTOS-ORES-MINERALS

BRITISH UNICORN LTD.
BERYLLIUM SMELTING Co., Ltd.
METALS — MINERALS — SCRAP
CERIUM MOLYBDENUM NICKEL TUNGSTEN
36/38 Southampton Street, Strand, LONDON, W.C.2

AGENCE MINIERE ET MARITIME S. A
2, rue Van Bree, Antwerp. Telegr.: RENTIERS, Antwerp.
-ORES- Weighing · Sampling · Assaying
METALS Chartering, Shipping and Forwarding Agents
RESIDUES · · Stevedores · ·
Engineering, Mining and Milling Equipment Agents

HENEAGE METALS
for Quality Ingots IN BRASS, GUN METAL & PHOSPHOR BRONZE.
PHONE ASTON CROSS 1177/8
HENEAGE METALS L^TD HENEAGE S^T BIRMINGHAM

SILTA S.p.A.
MINERALS, METALS, FERRO-ALLOYS, ORES & CONCENTRATES
We Buy:
Tantalite Ores. Tantalium, Niobium Ores, Tantaliferous Slags
MILANO, Corso Matteotti, 9
Cables: SILTAM, MILAN Phones: 700696 / 701715

JCG
★ METALS
★ ORES
★ MINERALS
of every description

J.C. Gilbert LTD
COLUMBIA HOUSE, ALDWYCH
LONDON, W.C.2
MONTREAL · NEW YORK · BUENOS AIRES
RIO DE JANEIRO · SYDNEY · HONG KONG
Members of the British Export Trade Research Organization

TOP RESULTS IN MEDIA RECOVERY— WITH *LOW-HEAD WASHING SCREEN

NOW ALSO BUILT IN ENGLAND

LOW-HEAD screens are widely used for draining or washing media from ore in heavy density application . . . for screening log washer products . . . for wet or dry sizing, rinsing and dewatering semi-fine to semi-coarse ores and aggregates

- HORIZONTAL OPERATION
- ENTIRE SCREEN BODY "STRESS RELIEVED"
- CABLE OR FLOOR MOUNTED
- SCREEN SURFACES FOR ABRASIVE ORES

*Hydrocone Crusher

Jaw Crusher

*Texrope Drives

Mills

ALLIS-CHALMERS MANUFACTURING COMPANY offer products of quality and integrity as the builders of the world's widest range of major industrial equipment. For ALLIS-CHALMERS builds complete power generation, distribution and control equipment—pumps—motors—V-Belt Drives—Crushing, cement and mining equipment—flour milling, food and chemical processing equipment—in all over 1,600 different products.

ALLIS-CHALMERS representatives will gladly look over your operation, show you how you may be able to reduce your operating costs with well integrated equipment.

*Low-Head, Hydrocone and Texrope are ALLIS-CHALMERS Trademarks

ALLIS-CHALMERS

Distributors throughout the World

For information, call or write:
ALLIS-CHALMERS MFG. CO.,
72B Salisbury House,
London Wall,
London, E.C.2.
'Phone: MONarch 6252

MOBILITY . . . COMFORT . . . EFFICIENCY

Illustrated is a typical survey unit for use in the Western Desert. We can supply units for all purposes, all climates and all operating conditions. Air conditioning fitted if required. Also: Heavy reconditioned Diesel or Petrol Vehicles; Diesel Pumps and Generators.

ROURA & FORGAS Ltd.

Hanover House, 73/78 High Holborn, London, W.C.1
Tel. HOL. 0517/9

Sole Export Distributors for the Coventry Steel Caravans Ltd.!
Also Distributors for Heavy Earth Moving Equipment, Disintegrators, etc.

BUTTERLEY
ALL STEEL PIT TUBS

THE BUTTERLEY COMPANY LTD. · RIPLEY · DERBY · ENGLAND. London Office 20, ASHLEY PLACE · VICTORIA · S.W.1

P.T.43

Printed in England for The Mining Journal Ltd. by Samuel Sidders & Son Ltd., 115, Salusbury Road, London, N.W.6. Registered as a Newspaper.